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UNITED STATES AIR FORCE

# OCCUPATIONAL SURVEY REPORT

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F-15 AVIONICS TEST STATION AND COMPONENT  
SPECIALIST CAREER LADDER

AFSC 451X4

AFPT 90-451-848

FEBRUARY 1990

OCCUPATIONAL ANALYSIS PROGRAM  
USAF OCCUPATIONAL MEASUREMENT CENTER  
AIR TRAINING COMMAND  
RANDOLPH AFB, TEXAS 78150-5000

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9 AF/LGMA	1			
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## PREFACE

This report presents the results of an Air Force occupational survey of the F-15 Avionics Test Station and Component Specialist (AFSC 451X4) career ladder. Authority for conducting occupational surveys is contained in AFR 35-2. Computer products used in this report are available for use by operations and training officials.

Mr Don Cochran developed the survey instrument, MSgt Corrie J. Wharton provided computer programming support, and Ms Tamme Lambert provided administrative support. Captain Kevin D. Osten analyzed the data and wrote the final report. This report has been reviewed and approved for release by Lieutenant Colonel Charles D. Gorman, Chief, Airman Analysis Branch, Occupational Analysis Division, USAF Occupational Measurement Center.

Copies of this report are distributed to Air Staff sections, major commands, and other interested training and management personnel. Additional copies may be requested from the Occupational Measurement Center, Attention: Chief, Occupational Analysis Division (OMY), Randolph AFB, Texas 78150-5000.

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## SUMMARY OF RESULTS

1. Survey Coverage: Survey results are based on responses from 832 F-15 Avionics Test Station and Component Specialist personnel. This represents 72 percent of the total assigned AFSC 451X4 population. Incumbents were surveyed across all major commands and included personnel from all DAFSC skill levels.
2. Career Ladder Structure: Four clusters (including 14 jobs) and two independent job types were identified in the career ladder structure analysis. One cluster (including four jobs and 32 percent of the total sample) spent varying amounts of time maintaining automatic test stations. Another cluster (including five jobs and 44 percent of the total sample) contained individuals who spent their time maintaining manual and electronic warfare test stations. Nine percent of the total sample were contained in the supervisory cluster containing three jobs. These members spent the majority of their time supervising, but performed technical tasks as well. The training cluster contained 5 percent of the total sample and consisted of two jobs, equipment instructors and classroom instructors. The Due-in-for-Maintenance (DIFM) Monitor IJT contained 11 junior members who spent the majority of their time performing supply functions dealing with DIFM materials. The smallest group was the Inspector IJT containing eight members. Personnel in this IJT performed quality control and quality assurance inspections in automatic, manual, and electronic warfare test station avionics shops.
3. Career Ladder Progression: The AFSC 451X4 career ladder shows a typical career progression pattern. At the 3- and 5-skill level the job is primarily technical. At the 7-skill level supervisory duties dominate over technical duties.
4. AFR 39-1 Specialty Descriptions: A comparison of survey data to AFR 39-1 indicates the AFR 39-1 Specialty Descriptions provide comprehensive depictions of the respective jobs. Only minor changes are recommended, primarily the addition of administrative, supply, and general shop duties in order to provide a more complete job description of career ladder functions.
5. Training Analysis: Survey data generally support the AFSC 451X4 STS and the 45134A and 45134B POIs. There were numerous tasks, performed by high percentages of first-term and first-enlistment personnel, not having an assigned proficiency code or being trained at technical school. These tasks should be evaluated for possible inclusion in future revisions of the courses.
6. Job Satisfaction: Overall, 451X4 personnel are satisfied with their jobs. Responses for all facets of job satisfaction were only slightly lower than those of a comparative sample of similar AFSC's surveyed in 1988. Comparisons with the previous OSRs show much improvement in all areas, especially reenlistment intentions. B-shred personnel find their job more satisfying and interesting than their A-shred counterparts, with both groups reporting high utilization of talents and training. There is an overall trend of increasing

job dissatisfaction as time goes on, but positive reenlistment intentions indicate the majority of 451X4 individuals are choosing reenlistment over separation. Job satisfaction is very good for all specialty groups, with the Training cluster and DIFM Monitor IJT reporting scores lower than the other specialty groups.

7. Implications: Survey data support the current structure of AFSC 451X4. The 326XX AFSCs have integrated well into the 451X4 structure, however, there is still a definite division of duties within the B-shred. Career ladder and training documents are adequate, but are in need of minor revisions to bring them up to speed.

OCCUPATIONAL SURVEY REPORT  
F-15 AVIONICS TEST STATION AND COMPONENT SPECIALIST CAREER LADDER  
(AFSC 451X4)

INTRODUCTION

This report presents the results of an occupational survey of the F-15 Avionics Test Station and Component Specialist career ladder completed by the USAF Occupational Measurement Center in November 1989. The present survey was requested by HQ ATC/TTOA, Randolph AFB TX.

Background

This is the first occupational survey of this AFSC since it was created in April 1987 under the Rivet Workforce concept. Essentially, the 451X4 career ladder was created by combining F-15 functions from previous AFSCs 326X3, 326X4, and 326X5. The survey was requested by HQ ATC/TTOA to gather data on the new AFSC which will be used to update career ladder documents and training.

As outlined in the AFR 39-1 Specialty Descriptions, AFSC 451X4 personnel inspect, troubleshoot, repair, modify, program, calibrate, and certify computerized, manual, and electronic warfare test stations, consoles, and system components at the intermediate level. These personnel also use avionics test stations, consoles, support equipment, and specialized precision measurement equipment to perform their duties.

Course training for the F-15 Avionics Test Station and Component Specialist follows a two-track course at Lowry AFB CO. The Apprentice F-15 Avionics Test Station and Component Specialist - Automatic Equipment Course (G3ABR45134A 000) is 34 weeks and 3 days long. The Apprentice F-15 Avionics Test Station and Component Specialist - Manual and Electronic Warfare (MEW) Equipment course (G3ABR45134B 000) lasts 36 weeks and 3 days. Both courses consist of two blocks. The first block covers electronic principles, circuit and logic diagrams, aircraft systems theory, operation and confidence testing of selected line replaceable units, computer principles, safety, security, handtool usage, and technical publications. The second block is equipment oriented and varies according to the shred to which airmen are assigned. The A-shred block II goes into F-15 category II avionics support equipment, avionics intermediate shop test stations, and common automatic test equipment (CATE), while the B-shred block II covers F-15 category II manual and electronic warfare avionics support equipment, communication, navigation, and identification, and indicators and controls test stations, and Tactical Electronic Warfare System (TEWS) Intermediate Test Equipment (TITE).

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## SURVEY METHODOLOGY

Data for this survey were collected using USAF Job Inventory AFPT 90-451-848, dated January 1989. The Inventory Developer reviewed pertinent career ladder documents and the previous 326X3, 326X4, and 326X5 inventories and OSRs to prepare a tentative task list. This task list was then validated through personal interviews with 27 subject-matter experts from three Air Force bases.

<u>UNIT</u>	<u>AIRCRAFT/REASON FOR VISIT</u>
3450 Technical Training Group, Lowry AFB CO	Technical Training Center
49th Component Repair Squadron, Holloman AFB NM	F-15A, F-15B
33rd Component Repair Squadron, Eglin AFB FL	F-15C, F-15D

The resulting inventory listed 975 tasks grouped into 24 duty headings. There were also 23 background questions.

### Survey Administration

From March through July 1989, Consolidated Base Personnel Offices at operational bases worldwide administered the inventory booklets to all eligible DAFSC 451X4 personnel at the 3-, 5-, and 7-skill levels. Participants were selected from a computer-generated mailing list provided by the Air Force Human Resources Laboratory, Brooks AFB TX. Personnel not receiving booklets included those in transition for a permanent change of station (PCS), members retiring at the time of survey, those hospitalized, and those who had not been in their current job for at least 6 weeks.

All individuals who filled out an inventory booklet first completed an identification and background information section. Next, they went through the booklet and checked each task performed in their current job. After checking all tasks performed, the respondents rated each of these tasks on a 9-point scale reflecting relative time spent on each task compared to all other tasks. Ratings ranged from 1 (indicating a very small amount of time spent) to 9 (indicating a very large amount of time spent). To determine relative time spent for each task checked by a respondent, the sum of a respondent's ratings was assumed to account for 100 percent of his or her time spent on the job. All of a respondent's ratings were added together and then each rating was divided by the sum of all responses. Then, this quotient was multiplied by 100 to obtain the relative time spent for each task. This procedure provided a basis for comparing tasks not only in terms of percent members performing, but also in terms of relative percent time spent on tasks and groups of tasks.

### Survey Sample

Participants in the survey were carefully selected to ensure there was a proportional representation across major command (MAJCOM) and paygrade groups. Table 1 shows the percentage distribution, by MAJCOM, of assigned personnel in the career ladder as of January 1988. Also shown in this table is the percentage distribution by MAJCOM in the final survey sample. Table 2 shows the survey sample representation across paygrades. As these tables indicate, survey representation by MAJCOM and paygrade was very good. The 832 respondents in the final survey sample represent 72 percent of the total 1,153 DAFSC 451X4 personnel assigned.

### Task Factor Administration

Once the survey data were processed and input into a UNISYS 1100 mainframe computer, Comprehensive Occupational Data Analysis Programs (CODAP) were used to analyze the data and create job descriptions for various groupings of respondents. But job descriptions alone do not provide sufficient data for making decisions about career ladder documents or training programs. While most participants in the survey process completed a USAF job inventory, selected senior 451X4 personnel were also asked to complete additional booklets rendering judgements on task training emphasis (TE) or task difficulty (TD). The TE and TD booklets were processed separately from the job inventories and the resulting data used in a number of different analyses discussed later in this report.

Task Difficulty (TD): Individuals completing TD booklets were asked to rate all of the tasks on a 9-point scale (from extremely low to extremely high) as to the relative difficulty of each task in the inventory. Difficulty is defined as the length of time it takes an individual to learn to do the task. TD data were independently collected from 70 experienced 451X4 supervisors. Interrater reliability analysis reflected a satisfactory agreement among raters. Ratings were standardized so tasks had an average difficulty of 5.00, with a standard deviation of 1.00. The resulting data yield a rank ordering of tasks indicating the degree of difficulty for each task in the inventory.

Training Emphasis (TE): Training emphasis is a rating of those tasks which require structured training for first-enlistment personnel. This training may be provided by resident technical schools, field training detachments (FTD), mobile training teams (MTT), or in-house formal OJT. Training emphasis data were collected from 68 experienced 451X4 supervisors, who were asked to rate inventory tasks on a 10-point scale (from no training required to extremely high training emphasis required). The interrater reliability analysis for these 68 raters indicated unacceptably low agreement on which tasks require some form of structured training for first-term personnel. Consequently, TE data are unavailable for this AFSC.

TABLE 1  
COMMAND REPRESENTATION OF AFSC 451X4 SURVEY SAMPLE

<u>COMMAND</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>
TAC	64	62
USAFE	14	16
PACAF	9	10
ATC	7	7
Alaskan Air Command	4	5

TOTAL PERSONNEL ASSIGNED: 1,153  
 TOTAL PERSONNEL ELIGIBLE FOR SURVEY: 1,065  
 TOTAL PERSONNEL IN SAMPLE: 832  
 PERCENT OF ASSIGNED IN SAMPLE: 72%  
 PERCENT OF ELIGIBLE IN SAMPLE: 78%

Note: Columns may not add to 100 percent due to rounding

TABLE 2  
PAYGRADE REPRESENTATION OF AFSC 451X4 SURVEY SAMPLE

<u>PAYGRADE</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>
AIRMAN	18	18
E-4	24	28
E-5	35	34
E-6	16	13
E-7	7	6

Note: Columns may not add to 100 percent due to rounding

When TD ratings are used with other information, such as percent members performing tasks, they can provide insight into first-term personnel training requirements and help validate the need for an increase or decrease in structured training for the career ladder.

### SPECIALTY JOBS (Career Ladder Structure)

The structure of jobs within the F-15 Avionics Test Station and Component Specialist career ladder was examined on the basis of similarity of tasks performed and the percent of time spent by job incumbents, independent of background or other factors.

For the purpose of organizing individual jobs into similar units of work, an automated job clustering program compares the job description for each individual in the sample to every other job description in terms of the tasks performed and the relative amount of time spent doing those tasks. The automated program is designed to find the two most similar job descriptions and merge them into a group. All other job descriptions are then compared to this group and those that are similar are also merged. In successive stages, new members are added to merge with groups already formed or to create new groups, until all job incumbents (and their respective job descriptions) are merged. The result is a pattern of jobs making up the 451X4 career ladder.

For this report, the career ladder structure is described in terms of clusters, job types, and independent job types. The basic identifying group is the Job Type. A job type is a group of individuals who perform many of the same tasks and spend similar amounts of time performing them. When different job types have a substantial degree of similarity between them, they are grouped together and labeled a Cluster. In many career ladders, there are specialized job types that are too dissimilar to be grouped into any cluster. These unique groups are labeled Independent Job Types (IJT).

#### Structure Overview

Based on the similarity of tasks performed and the amount of time spent performing each task, four clusters and two independent job types were identified in the examination of the F-15 Avionics Test Station and Component Specialist career ladder. The major jobs listed below are illustrated in Figure 1 and descriptions for each are given on the following pages. The stage (STG) or group (GRP) numbers printed beside each job title are the same numerical identifiers located on the CODAP-diagram. These identifiers are used during analysis of the groups to find specific information for each group. The letter N within parentheses refers to the number of personnel in the group.

# AFSC 451X4 SPECIALTY JOBS (N= 832)

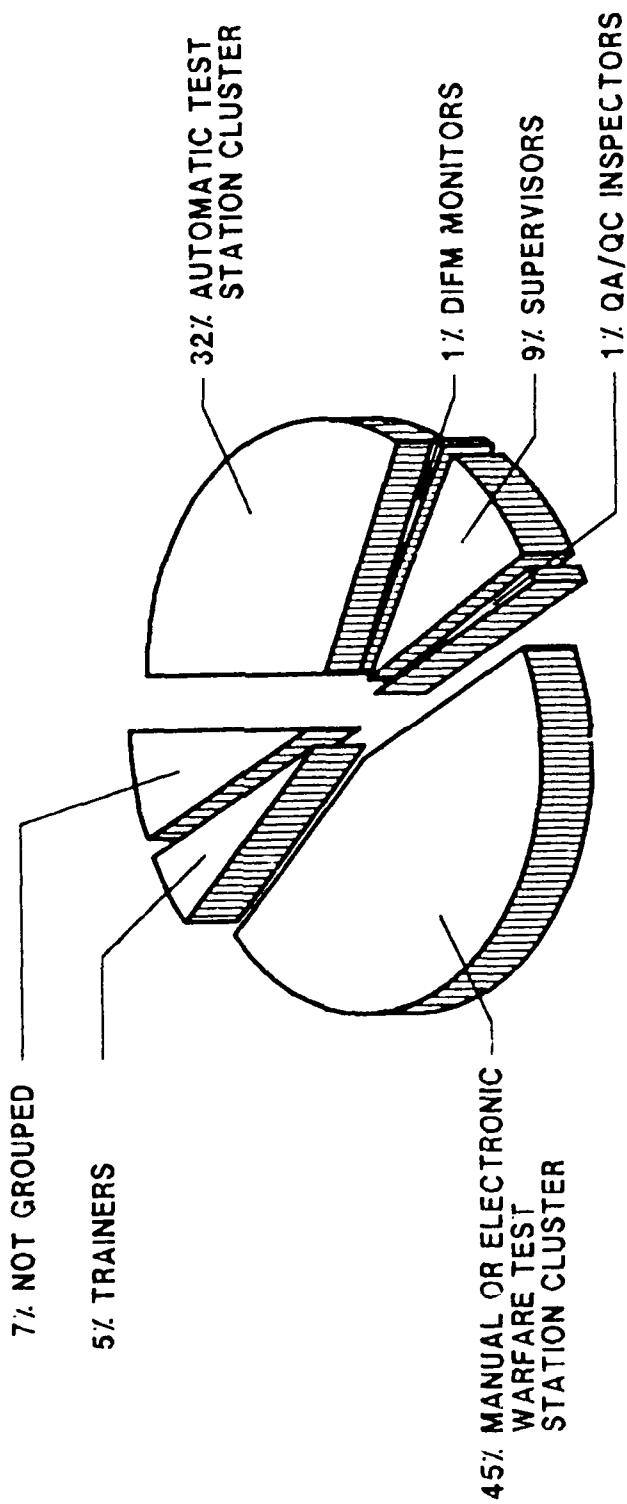


Figure i

I. AUTOMATIC TEST STATION CLUSTER (STG055, N=265)

- A. Computer Test Station (LRU only) Technicians (STG095, N=25)
- B. Computer Test Station Technicians (STG108, N=184)
- C. Microwave Test Station Technicians (STG102, N=23)
- D. Displays Test Station Technicians (STG131, N=32)

II. MANUAL OR ELECTRONIC WARFARE (EW) TEST STATION CLUSTER (STG032, N=373)

- A. Tactical Electronic Warfare System (TEWS) Intermediate Test Equipment (TITE) (TRU only) Technicians (STG246, N=5)
- B. TITE Technicians (STG104, N=126)
- C. Antenna A and B Test Station Technicians (STG135, N=12)
- D. Avionics Technicians (STG074, N=204)
- E. Team Leaders (STG064, N=12)

III. SUPERVISORY CLUSTER (STG054, N=76)

- A. Instructors or Supervisors (STG122, N=11)
- B. Production Supervisors (GRP092, N=30)
- C. Automatic Test Station (ATS) NCOICs (STG100, N=31)

IV. TRAINING CLUSTER (STG020, N=40)

- A. Classroom Instructors (STG037, N=33)
- B. Equipment Instructors (STG047, N=7)

V. DUE-IN-FOR-MAINTENANCE (DIFM) MONITOR IJT (STG091, N=11)

VI. QUALITY ASSURANCE OR QUALITY CONTROL (QA/QC) INSPECTOR IJT (STG045, N=8)

The AFSC 451X4 personnel forming these clusters and independent job types account for 93 percent of the total survey sample. The other 7 percent, referred to as isolates, did not merge with any of these identified groups because they perform tasks or sets of tasks which differ from the tasks performed by the groups above.

Two tables in this section provide background information about the clusters and independent job types listed. Table 3 provides background information, such as DAFSC distribution across each group, predominant grades, total months in service, and average number of tasks performed. For example, Table 3 shows the Automatic Test Station Cluster has 265 members, mostly 5-skill level personnel in paygrades E-4 and E-5, averages 56 months in the career field, and perform an average of 294 tasks. Table 4 shows the average time specialty job groups spend on the duties listed in the job inventory.

TABLE 3  
SELECTED BACKGROUND DATA FOR 451X4 CAREER LADDER JOBS

	NUMBER IN GROUP	PERCENT OF TOTAL SAMPLE	PERCENT IN CONUS	INDEPENDENT JOB TYPES			
				AUTOMATIC TEST STATION CLUSTER	MANUAL/EW TEST STATION CLUSTER	SUPERVISORY CLUSTER	TRAINING CLUSTER
	265	32%	67%	373	45%	9%	40
					62%	64%	100%
							11
							45%
							1%
							8
							1%
							37%
DAFSC DISTRIBUTION (PERCENT RESPONDING):							
45134A	14%	0	0	0	7%	0	0
45154A	57%	1%	26%	26%	0	49%	9%
45134B	0	26%	53%	53%	3%	3%	0
45154B	10%	53%	3%	3%	33%	82%	0
45174	20%	19%	91%	91%	15%	9%	12%
						82%	87%
PREDOMINANT GRADES	E-4/5	E-3/4/5	E-6	E-5	E-4	E-5	E-5
AVERAGE MONTHS IN CAREER FIELD	56	49	104	91	51	64	64
AVERAGE MONTHS IN SERVICE	78	65	154	96	58	137	137
PERCENT FIRST ENLISTMENT	52%	56%	11%	5%	55%	0	0
PERCENT SUPERVISING	46%	41%	91%	8%	36%	43%	43%
AVERAGE TASKS PERFORMED	294	184	99	27	16	37	37
PREDOMINANT MAJCOM ASSIGNMENT	TAC	TAC	TAC	ATC	TAC	TAC	TAC

Note: Some columns may not add to 100 percent due to rounding

TABLE 4

AVERAGE TIME SPENT ON DUTIES BY SPECIALTY JOB GROUPS  
(PERCENT MEMBERS PERFORMING)

JOB GROUPS	INDEPENDENT JOB TYPES			
	AUTOMATIC TEST STATION CLUSTER	MANUAL/EW TEST STATION CLUSTER	SUPERVISORY CLUSTER	TRAINING CLUSTER
A. ORGANIZING AND PLANNING	1	2	16	2
B. DIRECTING AND IMPLEMENTING	1	2	18	3
C. EVALUATING AND INSPECTING	1	1	17	2
D. TRAINING	1	2	17	56
E. PERFORMING GENERAL ADMINISTRATIVE AND SUPPLY TASKS	8	10	17	8
F. PERFORMING GENERAL AVIONICS SHOP TASKS	4	7	3	7
G. PERFORMING GENERAL MAINTENANCE ON TEST STATIONS AND LINE REPLACEABLE UNITS (LRU)	14	14	6	6
H. MAINTAINING COMPUTER TEST STATIONS ASSIGNED LRUs	18	0	1	1
I. MAINTAINING COMPUTER TEST STATIONS AND ASSIGNED TESTER REPLACEABLE UNITS (TRU)	6	0	0	1
J. MAINTAINING DISPLAYS TEST STATIONS ASSIGNED LRUs	13	0	1	1
K. MAINTAINING DISPLAYS TEST STATIONS AND ASSIGNED TRUs	6	0	0	2
L. MAINTAINING MICROWAVE TEST STATIONS ASSIGNED LRUs	6	0	1	0
M. MAINTAINING MICROWAVE TEST STATIONS AND ASSIGNED TRUs	6	0	1	1
N. MAINTAINING F-15 COMMON AUTOMATIC TEST EQUIPMENT (CATE)	13	0	2	4
O. MAINTAINING ANTENNA A AND B TEST STATIONS ASSIGNED LRUs	0	0	0	0
P. MAINTAINING ANTENNA A AND B TEST STATIONS AND ASSIGNED TRUs	0	4	0	0

TABLE 4 (CONTINUED)

AVERAGE TIME SPENT ON DUTIES BY SPECIALTY JOB GROUPS  
(PERCENT MEMBERS PERFORMING)

<u>JOB GROUPS</u>	<u>INDEPENDENT JOB TYPES</u>				
	<u>AUTOMATIC TEST STATION CLUSTER</u>	<u>MANUAL/EW TEST STATION CLUSTER</u>	<u>TEST STATION CLUSTER</u>	<u>SUPERVISORY CLUSTER</u>	<u>TRAINING CLUSTER</u>
Q. MAINTAINING COMMUNICATION, NAVIGATION, AND IDENTIFICATION (CNI) TEST STATIONS ASSIGNED LRUs	0	0	0	0	0
R. MAINTAINING COMMUNICATION, NAVIGATION, AND IDENTIFICATION (CNI) TEST STATIONS AND ASSIGNED TRUS	0	2	0	1	0
S. MAINTAINING INDICATORS AND CONTROLS TEST STATIONS ASSIGNED LRUs	0	19	0	0	0
T. MAINTAINING INDICATORS AND CONTROLS TEST STATIONS AND ASSIGNED TRUS	0	2	0	0	0
U. MAINTAINING TACTICAL ELECTRONIC WARFARE SYSTEMS (TEWS) INTERMEDIATE TEST EQUIPMENT (TITE) ASSIGNED LRUs	0	12	0	1	0
V. MAINTAINING TACTICAL ELECTRONIC WARFARE SYSTEMS (TEWS) INTERMEDIATE TEST EQUIPMENT (TITE) AND ASSIGNED TRUS	0	8	0	5	0
W. MAINTAINING ENGINE MONITORING SYSTEM TEST UNITS AND ASSIGNED LRUs	0	0	0	0	0
X. MAINTAINING ELECTRONIC COUNTERMEASURES (ECM) POD TEST STATIONS AND ECM PODS	0	0	0	0	0

### Job Descriptions

I. AUTOMATIC TEST STATION CLUSTER (STG055, N=265). The 265 members of this A-shred cluster comprise 32 percent of the survey sample. Most (57 percent) are 5-skill level personnel who spend 69 percent of their time maintaining computer, displays, and microwave test stations and assigned line replaceable units (LRUs) and tester replaceable units (TRUs) (Duties G thru M). The remainder of their time is divided between maintaining common automatic test equipment (CATE) (13 percent), and performing general administrative, supply, and avionics shop tasks (12 percent). The tasks performed by these members typically include:

- inspect or clean test stations or LRUs
- clean shop facilities
- perform programmed test of IMU LRUs
- repair switching complexes
- perform programmed test of 039 LRUs
- perform confidence test of MTSs
- isolate malfunctions with 022 LRUs
- perform programmed test of ANMI LRUs
- level HUD tables using theodolites and alignment fixtures

Automatic Test Station personnel perform the highest average number of tasks (294) of any group identified, and average 78 months total active federal military service (TAFMS). Fifty-two percent are in their first enlistment and 46 percent indicate they supervise other avionics test station personnel.

The four job types within the Automatic Test Station cluster were based upon the type of equipment maintained. The Computer Test Station Technicians (STG108, N=184) are the largest group and spend 28 percent of their time maintaining computer test stations and 14 percent maintaining common automatic test equipment (CATE). Like the Computer Test Station Technicians, the Computer Test Station (LRU only) Technicians (STG095, N=25) spend most of their time (49 percent) maintaining computer test stations, but work primarily with assigned LRUs (45 percent). The Displays Test Station Technicians (STG131, N=32) spend 42 percent of their time maintaining displays test stations. The Microwave Test Station Technicians (STG102, N=23) spend 29 percent of their time maintaining microwave test stations, but also spend 20 percent of their time maintaining CATE.

II. MANUAL OR ELECTRONIC WARFARE (EW) TEST STATION CLUSTER (STG032, N=373). This large cluster of B-shred personnel constitutes 44 percent of the total sample. Fifty-three percent of these people are at the 5-skill level. They spend 61 percent of their time maintaining indicators and controls; antenna A and B; and communication, navigation, and identification test

stations and maintaining tactical electronic warfare systems (TEWS) intermediate test equipment (TITE) (Duties O through V). Typical tasks performed by personnel within this cluster include:

- remove or replace LRU minor hardware
- initiate or complete AFTO Forms 350
- repair radar system antennas
- clean and lubricate equipment components
- perform operational checkout of AN/ARC-164 or AN/ARC-164 (HQ) UHF R/T
- isolate malfunctions within ICCPs or ICCP(HQs)
- perform TITE basic OA/FIs
- align AN/ALQ-128 receiver/transmitters
- repair IFFs

Personnel in this cluster average 184 tasks performed, 65 months TAFMS, and 41 percent indicate they supervise other AFSC 451X4 personnel.

Five job types, based upon equipment maintained and previous AFSC, were identified in this cluster. The TITE Technicians (STG104, N=126) spend 55 percent of their time maintaining TITE and 29 percent performing general test station maintenance, administrative, supply, and general shop tasks. A smaller group of TITE (TRU only) Technicians (STG246, N=5) spend 46 percent of their time maintaining TITE, but the majority of that time (43 percent) is spent with assigned TRUs. Forty-eight percent of their time is spent performing general test station maintenance (28 percent) and administrative, supply, and shop duties (20 percent). Another job type is the Team Leaders (STG64, N=12) who spend 52 percent of their time performing general test station maintenance, and performing general administrative, supply, and avionics shop tasks. This group also performs the most supervisory tasks in this cluster (23 percent) and could be considered first-line supervisors. These three jobs associated with TITE correspond to the previous AFSC 326X3B. The Avionics Technicians (STG074, N=204) spend their time maintaining a variety of test stations to include indicators and controls (35 percent), communication, navigation, and identification (17 percent), and antenna A and B (12 percent). Additionally, 27 percent of their time is spent on general test station maintenance and shop maintenance. The Antenna A and B Test Station Technicians (STG135, N=12) maintain A and B test stations 29 percent of their time, but spend the majority of their time (46 percent) performing general test station maintenance as well as general administrative and supply tasks. Members in these last two job types perform tasks corresponding to the previous AFSC 326X5B.

III. SUPERVISORY CLUSTER (STG054, N=76). The 76 members of this cluster represent 9 percent of the survey sample. The majority of these people (91 percent) function at the 7-skill level and spend most of their time supervising, counseling, and evaluating subordinates, establishing work methods and priorities, and compiling data for reports. While they spend very little time

performing specific maintenance actions, 26 percent of their time is spent performing general test station maintenance, and performing administrative, supply, and avionics shop tasks. Tasks commonly performed by this cluster are:

- write APRs
- interpret policies, directives, or procedures for subordinates
- supervise avionics test station and component technicians
- establish performance standards for subordinates
- determine training requirements
- direct shop maintenance activities
- perform QA or QC inspections of LRUs
- compile data for reports

Personnel in this cluster perform an average of 99 tasks, average 154 months TAFMS, and 91 percent indicate they supervise other Avionics Test Station and Component Technicians.

There are three job types within this cluster. The Instructors or Supervisors (STG122, N=11) have a T prefix, are assigned to Lowry AFB, and spend 48 percent of their time performing training tasks. The Production Supervisors (GRP092, N=30) spend 55 percent of their time performing supervisory tasks, 30 percent of their time on general administrative and supply tasks, and the rest of their time split between general test station maintenance and avionics shop tasks. The Automatic Test Station NCOICs (STG100, N=31) spend 80 percent of their time performing supervisory tasks and are the most senior job type in the Supervisory cluster.

IV. TRAINING CLUSTER (STG020, N=40). This cluster represents 5 percent of the total sample and contains 40 members. The majority of this group functions at the 5-skill level (49 percent A-shred, 33 percent B-shred) and all are members of ATC and assigned to the 3450 TCHTG at Lowry AFB CO. These individuals conduct classroom and equipment training, administer and score tests, and annotate training records. By far, the majority of their time is spent training (56 percent), both in the classroom and on equipment. Typical tasks performed by this group are:

- conduct resident course classroom training
- administer tests
- write test questions
- interpret system diagrams or schematics
- perform TITE basic OA/FIs
- counsel personnel on personal or military-related matters
- evaluate personnel for compliance with performance standards or technical orders
- evaluate effectiveness of training programs

Training personnel average 27 tasks performed, 96 months TAFMS, and 8 percent indicate they supervise other AFSC 451X4 personnel.

There were two job types within the Training cluster. The Classroom Instructors (STG037, N=33) spend their time instructing students in theory and other concepts in the classroom environment and spend very little time performing hands-on training. The Equipment Instructors (STG047, N=7), on the other hand, perform the majority of the hands-on equipment instruction in the shop environment, consequently spending more time maintaining and working on test stations and other shop hardware.

V. DUE-IN-FOR-MAINTENANCE (DIFM) MONITOR IJT (STG091, N=11). This highly specialized group of 11 members represents 1 percent of the total sample. Five-level, B-shred airmen make up the majority of this group (82 percent), and they spend 81 percent of their time performing general administrative and supply tasks (Duty E) dealing with DIFM items. What little time they spend on maintenance duties (5 percent) is general in nature. Tasks commonly performed by this IJT include:

- maintain DIFM transaction rosters
- process DIFM items
- maintain AF Forms 2000 suspense files
- complete DD Forms 1348-1
- calibrate torque wrenches
- coordinate maintenance work with appropriate personnel or agencies
- prepare equipment for turn-in
- maintain deficiency, service, or status reports

DIFM personnel perform an average of 16 tasks, are the most junior group with an average of 58 months TAFMS, and 36 percent indicate they supervise other AFSC 451X4 personnel.

VI. QUALITY ASSURANCE OR QUALITY CONTROL INSPECTOR IJT (STG045, N=8). These eight inspectors represent 1 percent of the total sample and all but one are 7-skill level personnel. These personnel spend 28 percent of their time inspecting and evaluating equipment and programs, but the majority of their time is spent performing general maintenance on test stations and performing general administrative and supply tasks. Some tasks commonly performed by this IJT include:

- perform QA or QC inspection of test stations
- perform QA or QC inspection of LRUs
- evaluate personnel for compliance with performance standards or technical orders
- review AFTO Forms 244 and 245

evaluate safety and security problems  
develop inspection procedures  
perform QA or QC inspection of LRU test packages  
report material deficiencies

The average number of tasks performed by this group is 37, and 43 percent indicate they supervise other AFSC 451X4 personnel. This fairly senior group averages 137 months TAFMS, second only to the Supervisory cluster.

#### Comparison of Specialty Jobs

Four clusters and two IJTs were identified in the AFSC 451X4A/B structural analysis. All members are responsible for performing varying amounts of general administrative, supply, and avionics shop tasks, and for performing general maintenance on specific test stations and assigned LRUs. The differences in the amount of time spent on the other duties dictate to which cluster or IJT they are assigned.

The Automatic Test Station cluster contained four jobs and accounted for 32 percent of the total 451X4 sample. Each job was responsible for maintaining a specific type(s) of automatic test station (computer, displays, or microwave) and assigned LRUs and TRUs. Personnel in this cluster also spent varying amounts of time maintaining F-15 common automatic test equipment (CATE). The Manual or Electronic Warfare cluster contains five jobs and accounts for 44 percent of the total sample of 451X4s. Each job was involved with the maintenance of either TITE and assigned LRUs and TRUs or with the maintenance of manual test stations (antenna A and B, communication, navigation, and identification, and indicators and controls) and assigned LRUs and TRUs. Personnel in the Supervisory cluster accounted for 9 percent of the total sample and were broken down into three jobs based upon time spent on supervisory duties. The Training cluster accounted for 5 percent of the total sample and included two jobs. The Classroom Instructors taught theories in the classroom, and the Equipment Instructors taught hands-on training in the shop. The DIFM Monitor IJT accounted for 1 percent of the total sample. These junior personnel spend the majority of their time performing administrative and supply tasks. The Inspector IJT represented 1 percent of the total sample. Individuals in this IJT inspected various programs and test stations.

#### Comparison of Current Survey to Previous Surveys

The results of the specialty job analysis for this survey were compared to those of the previous OSRs for AFSC 326X3B, AFPT 90-326-428B, dated December 1981; AFSC 326X4B, AFPT 90-326-428C, dated June 1982; and AFSC 326X5B, AFPT 90-326-428E, dated November 1981. Rivet Workforce initiatives converted AFSC 326X4B directly to 451X4A, AFSC 326X3B to the TITE portion of 451X4B, and AFSC 326X5B to the manual test station portion of 451X4B. The A-shred portions of those 326XX OSRs dealt with F/FB-111 aircraft. Table 5 shows comparisons of the jobs identified in the OSRs. The 326X4B OSR identified three clusters and two IJTs, showing only minor differences from the

TABLE 5  
JOB COMPARISONS BETWEEN CURRENT AND PREVIOUS SURVEYS \*

<u>CURRENT SURVEY (N=832)</u>	<u>PREVIOUS SURVEYS</u>
AUTOMATIC TEST STATION CLUSTER (N=267)	TEST STATION PERSONNEL CLUSTER (N=197) (326X4B)
A. Computer Test Station Technicians (N=184)	Multiple Test Station Operator/Maintainer (N=91) Computer and Displays Test Station Personnel (N=13)
B. Computer Test Station (LRU only) Technicians (N=25)	Computer Test Station Personnel (N=30) Computer Test Station and General Maintenance (N=6) Junior Computer Test Station Personnel (N=5)
C. Displays Test Station Technicians (N=32)	Displays Test Station Personnel (N=25)
D. Microwave Test Station Technicians (N=23)	Microwave Test Station Personnel (N=17)
MANUAL/EW TEST STATION CLUSTER (N=373)	TEWS MAINTENANCE CLUSTER (N=98) (326X3B)
A. TITE Maintenance Technicians (N=126)	F-15 MANUAL TEST STATION SHOP PERSONNEL CLUSTER (N=122) (326X5B)
TITE (TRU only) Technicians (N=5)	
Team Leaders (N=12)	
B. Avionics Technicians (N=204)	
Antenna A and B Test Station Technicians (N=12)	
SUPERVISORY CLUSTER (N=76)	
A. Production Supervisors (N=30)	F-15 Supervisors (N=10) (326X3B) Shift Supervisors (N=5) (326X4B) F-15 Shop Shift Supervisors (N=5) (326X5B)
B. Instructors or Supervisors (N=11)	Supervisors/Administrators (N=21) (326X3B)
C. Automatic Test Station NCOICs (N=31)	Shop NCOICs (N=10) (326X4B) Manual Test Station Shop Chiefs (N=8) (326X5B)

TABLE 5 (CONTINUED)  
JOB COMPARISONS BETWEEN CURRENT AND PREVIOUS SURVEYS \*

<u>CURRENT SURVEY (N=832)</u>	<u>PREVIOUS SURVEYS</u>
TRAINING CLUSTER (N=40)	TECHNICAL TRAINING INSTRUCTORS (N=12) (326X3B) TRAINING PERSONNEL (N=18) (326X5B)
A. Classroom Instructors (N=33) B. Equipment Instructors (N=7)	Classroom Instructors (N=6) (326X4B) Equipment Training Instructors (N=8) (326X4B)
DIFM MONITORS (N=11)	ADMINISTRATIVE RECORDS IJT (N=11) (326X3B) DIFM MONITORS (N=6) (326X4B)
QA/QC INSPECTORS (N=8)	NOT IDENTIFIED

\* AFSC 326X3B, dated December 1981  
AFSC 326X4B, dated June 1982  
AFSC 326X5B, dated November 1981

current data. However, the Staff Manager IJT was not found in the current data. The 326X3B OSR identified two clusters and two IJTs and the 326X5B OSR identified two clusters and one IJT, both of which matched the findings of current data.

There was one IJT (QA/QC Inspectors, N=8) identified in the current survey not found in any of the previous OSRs. The QA/QC Inspector job is not unique to AFSC 451X4 and was probably incorporated into one or several of the previous 326XX supervisory job groups.

In summary, the 451X4 career ladder has undergone major structural changes due to Rivet Workforce initiatives. The job of the 3-/5-skill level 451X4A group has remained essentially the same, while the job of the 451X4B 3-/5-skill level group has undergone significant changes. As 326X3 or 326X5 technicians, they were only responsible for the maintenance of either manual or electronic warfare test stations. Now, as 451X4Bs, they must be proficient in the maintenance of manual as well as electronic warfare test stations. At the 7-skill level, the job has changed even more drastically. Previously, 7-skill level personnel were maintaining only one type of test station and now they must know about maintaining all three types, potentially limiting their depth of knowledge for any one test station. Jobs of the previous AFSCs were found rather distinctively in the current data, but were beginning to show more intrashred integration. The OSR comparative match was accomplished with good results. Any apparent differences not mentioned can be attributed to differences and variations in the construction of the job inventory booklets for the surveys.

#### ANALYSIS OF DAFSC GROUPS

An analysis of DAFSC groups, in conjunction with the analysis of the career ladder structure, is an important part of each occupational survey. DAFSC analysis identifies similarities and differences in task and duty performance at the various skill levels. This information may be used to evaluate how well career ladder documents, such as AFR 39-1 Specialty Descriptions and the STS, reflect what career ladder personnel are actually doing in the field.

Comparisons of the duties and tasks performed across DAFSCs 45134A and 45154A and DAFSCs 45134B and 45154B revealed minimal differences between the two same-shred skill levels. The 3-skill level A-shred members spend slightly more time performing general test station maintenance (Duty G), maintaining displays test stations and assigned LRUs (Duty J), and maintaining computer test stations and assigned LRUs (Duty H) and the 5-skill level A-shred members spend slightly more time performing training (Duty D), but the differences are insignificant, and the specialty jobs performed by the two DAFSC groups are essentially identical. The differences between the 3- and 5-skill level B-shred members are insignificant and their jobs are also considered identical. Data indicate 3-skill level members are spending slightly more time maintaining both antennas A and B (Duty O) and indicators and controls (Duty

S) test stations and assigned LRUs, and 5-skill level members are performing more training (Duty D). The differences between the two A-shred and the two B-shred groups are minimal and they are combined in this report.

Progressing from the 3- to the 7-skill level, a typical pattern of progression is noted. All skill levels spend 27 to 31 percent of their time performing general administrative, supply, and shop tasks, and performing general maintenance on test stations and assigned LRUs. At the 7-skill level, supervisory duties are increased over the 3-/5-skill level group, while the amount of time spent on technical duties is significantly reduced and dispersed over both automatic and manual/EW test station duties (Table 6).

#### Skill-Level Descriptions

DAFSC 45134A/45154A. The 225 members of this 3-/5-skill level A-shred group comprise 27 percent of the total survey sample. Their job is primarily technical in nature, spending 73 percent of their time maintaining automatic test stations (Duties G through N) and 14 percent of their time performing general shop, administrative, and supply tasks. The Automatic Test Station cluster employs 83 percent of these members and the Training cluster another 8 percent (Table 7). Group members perform an average of 239 tasks, with 146 tasks accounting for 50 percent of their job time. Table 8 displays the representative tasks performed by this group and Table 9 shows which tasks differentiate A-shred 3-/5-skill level people from 7-skill level members.

DAFSC 45134B/45154B. This group of 361 B-shred 3-/5-skill level members represents 43 percent of the total sample. Their job is technical, with 71 percent of their time spent maintaining manual test stations and TITE (Duties G, and O thru W) while general shop, administrative, and supply tasks consume another 18 percent. Their biggest employer is the Manual or Electronic Warfare Test Station cluster (82 percent) followed by the Automatic Test Station cluster (7 percent) (Table 7). Members in this group perform an average of 173 tasks, with 139 tasks accounting for 50 percent of their job time. Representative tasks can be seen in Table 10, and the tasks which best differentiate these B-shred 3-/5-skill level members from 7-skill level members are in Table 11.

DAFSC 45174. Thirty-two percent of the total sample is represented in this group of 239 7-skill level individuals. Supervisory duties consume the majority of this group's time (42 percent), followed by technical duties (38 percent) and general shop, administrative, and supply duties (18 percent). The Manual or Electronic Warfare Test Station cluster employs 29 percent of these 7-levels, closely followed by the Supervisory cluster (28 percent) and the Automatic Test Station cluster with 22 percent. There were two types of 7-levels differentiated by the type of tasks performed. One group performed supervisory as well as technical tasks, while the other group performed primarily supervisory tasks. Personnel in this group perform an average of 164 tasks, with 109 tasks accounting for 50 percent of their job time. Table 12 identifies representative tasks for these members, and Tables 9 and 11 show tasks that best differentiate these members from their 3-/5-skill level counterparts.

TABLE 6

## AVERAGE TIME SPENT ON DUTIES BY DAFSC GROUPS

JOB GROUPS	DAFSC 45134A/ 45154A (N=225)	DAFSC 45134B/ 45154B (N=361)	DAFSC 45174 (N=239)
A. ORGANIZING AND PLANNING		1	2
B. DIRECTING AND IMPLEMENTING		1	2
C. EVALUATING AND INSPECTING		1	1
D. TRAINING		6	4
E. PERFORMING GENERAL ADMINISTRATIVE AND SUPPLY TASKS		9	11
F. PERFORMING GENERAL AVIONICS SHOP TASKS		5	7
G. PERFORMING GENERAL MAINTENANCE ON TEST STATIONS ASSIGNED LINE REPLACEABLE UNITS (LRU)		13	13
H. MAINTAINING COMPUTER TEST STATIONS ASSIGNED LRUs	16	2	10
I. MAINTAINING COMPUTER TEST STATIONS AND ASSIGNED TESTER REPLACEABLE UNITS (TRU)		5	1
J. MAINTAINING DISPLAYS TEST STATIONS ASSIGNED LRUs	11	1	3
K. MAINTAINING DISPLAYS TEST STATIONS AND ASSIGNED TRUs	5	*	1
L. MAINTAINING MICROWAVE TEST STATIONS ASSIGNED LRUs	6	*	1
M. MAINTAINING MICROWAVE TEST STATIONS AND ASSIGNED TRUs	5	*	1
N. MAINTAINING F-15 COMMON AUTOMATIC TEST EQUIPMENT (CATE)	12	1	3
O. MAINTAINING ANTENNA A AND B TEST STATIONS ASSIGNED LRUs	*	5	1
P. MAINTAINING ANTENNA A AND B TEST STATIONS AND ASSIGNED TRUs	*	4	1
Q. MAINTAINING COMMUNICATION, NAVIGATION, AND IDENTIFICATION (CNI) TEST STATIONS ASSIGNED LRUs	*	8	2
R. MAINTAINING COMMUNICATION, NAVIGATION, AND IDENTIFICATION (CNI) TEST STATIONS AND ASSIGNED TRUs	*	2	1
S. MAINTAINING INDICATORS AND CONTROLS TEST STATIONS ASSIGNED LRUs	*	17	4
T. MAINTAINING INDICATORS AND CONTROLS TEST STATIONS AND ASSIGNED TRUs	*	2	*
U. MAINTAINING TACTICAL ELECTRONIC WARFARE SYSTEMS (TEWS) INTERMEDIATE TEST EQUIPMENT (TITE) ASSIGNED LRUs	1	11	3
V. MAINTAINING TACTICAL ELECTRONIC WARFARE SYSTEMS (TEWS) INTERMEDIATE TEST EQUIPMENT (TITE) AND ASSIGNED TRUs	1	8	*
W. MAINTAINING ENGINE MONITORING SYSTEM TEST UNITS AND ASSIGNED LRUs AND ECM PODS	*	-	-

\* Less than .5 percent  
 - Nonresponse

TABLE 7  
DISTRIBUTION OF DAFSC GROUP MEMBERS ACROSS SPECIALTY JOBS

<u>SPECIALTY JOBS</u>	DAFSC 45134/54A (N=225)		DAFSC 45134/54B (N=361)		DAFSC 45174 (N=239)	
	<u>NUMBER</u>	<u>PERCENT</u>	<u>NUMBER</u>	<u>PERCENT</u>	<u>NUMBER</u>	<u>PERCENT</u>
I. AUTOMATIC TEST STATION CLUSTER	186	83%	25	7%	52	22%
III. MANUAL/EW TEST STATION CLUSTER	5	2%	295	82%	70	29%
III. SUPERVISORY CLUSTERS	5	2%	2	1%	68	28%
IV. TRAINING CLUSTER	19	8%	14	4%	6	3%
V. DIFM MONITORS	1	-	9	2%	1	-
VI. QA/QC INSPECTOR CLUSTER	0	-	1	-	7	3%
NOT GROUPED	9	4%	15	4%	35	15%

- Less than .5 percent

TABLE 8  
REPRESENTATIVE TASKS PERFORMED BY  
45134A/54A PERSONNEL  
(N=225)

<u>TASKS</u>	<u>MEMBERS PERFORMING</u>
G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU)	91
E122 COMPLETE AF FORMS 2005 (ISSUE/TURN IN REQUEST)	86
F185 CLEAN SHOP FACILITIES	86
G257 REMOVE OR REPLACE LRU MINOR HARDWARE	86
G233 INVENTORY TEST STATIONS, CABINETS, ROLLAWAYS, SIMULATORS, OR MOCKUPS	75
H316 PERFORM PROGRAMMED TEST OF IMU LRUs	73
N618 PERFORM OA/FI OF SWITCHING COMPLEXES	72
N620 PERFORM PERIODIC MAINTENANCE ON CABINET BLOWER FILTERS	71
H289 ISOLATE MALFUNCTIONS WITHIN INERTIAL MEASUREMENT UNIT (IMU) LRUs	69
H340 REPAIR IMUs	69
N643 REPAIR SWITCHING COMPLEXES	69
E143 INVENTORY TOOLS, SUCH AS CONSOLIDATED TOOL KITS (CTK) AND TOOL ROOM CHITS	68
H291 ISOLATE MALFUNCTIONS WITHIN LEAD COMPUTING GYRO (LCG) LRUs	66
F189 INTERPRET SYSTEM DIAGRAMS OR SCHEMATICS	65
I376 PERFORM CONFIDENCE TEST OF CTSs	65
J429 PERFORM PROGRAMMED TEST OF HUD UNIT LRUs	63
L509 ADJUST RADAR RECEIVER (022) SRUs	63
L523 PERFORM PROGRAMMED TEST OF 039 LRUs	63
M546 PERFORM CONFIDENCE TEST OF MTSs	61
J441 REPAIR CONVERTER PROGRAMMERS	61
J407 ISOLATE MALFUNCTIONS WITHIN CONVERTER PROGRAMMER LRUs, OTHER THAN DURING ON-AIRCRAFT OPERATIONAL CHECKOUTS	59
K483 PERFORM CONFIDENCE TEST OF DTSs	59
M547 PERFORM MICROWAVE HARMONIZATION PROCEDURES	56
K482 LEVEL HUD TABLES USING THEODOLITES AND ALIGNMENT FIXTURES	54
A8 DETERMINE WORK PRIORITIES	39
D101 MAINTAIN TRAINING RECORDS	39
D89 COUNSEL TRAINEES ON TRAINING PROGRESS	33
B49 SUPERVISE APPRENTICE AVIONICS AUTOMATIC TEST STATION AND COMPONENT SPECIALIST (AFSC 45134A)	30
C79 WRITE APRs	28

Average number of tasks performed-239

TABLE 9

TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 45134A/45154A and 45174 PERSONNEL  
(PERCENT MEMBERS PERFORMING)

<u>TASKS</u>	<u>DAFSC 45134A/ 45154A (N=225)</u>	<u>DAFSC 45174 (N=239)</u>	<u>DIFFERENCE</u>
N605 PERFORM OA/FI OF DIAs	75	22	+53
G230 INSPECT, CLEAN, OR ADJUST MAGNETIC TAPE TRANSPORT UNITS (MTTU)	80	28	+52
N618 PERFORM OA/FI OF SWITCHING COMPLEXES	72	21	+51
H316 PERFORM PROGRAMMED TEST OF IMU LRUs	73	22	+51
L522 PERFORM PROGRAMMED TEST OF 022 LRUs	67	19	+48
N603 PERFORM OA/FI OF CCDPs	66	18	+48
I376 PERFORM CONFIDENCE TEST OF CTSS	65	18	+47
H312 PERFORM PROGRAMMED TEST OF EAIC LRUs	67	20	+47
N589 ISOLATE MALFUNCTIONS WITHIN DIAs	68	22	+46
L517 ISOLATE MALFUNCTIONS WITHIN 022 LRUs	64	18	+46
* * * * *	* * * * *	* * * * *	* * * * *
B46 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	13	60	-47
B31 COUNSEL PERSONNEL ON PERSONAL OR MILITARY-RELATED MATTERS	21	67	-46
C79 WRITE APRs	28	74	-46
C80 WRITE RECOMMENDATIONS FOR AWARDS AND DECORATIONS	12	52	-40
A5 COORDINATE MAINTENANCE WORK WITH APPROPRIATE PERSONNEL OR AGENCIES	16	55	-39
A21 PLAN OR SCHEDULE WORK PRIORITIES	16	52	-36
D83 ANNOTATE TRAINING RECORDS	39	73	-34
B52 SUPERVISE AVIONICS MANUAL AND ELECTRONIC WARFARE TEST STATION CONSOLE SPECIALIST (AFSC 45154B)	6	39	-33
D98 EVALUATE PERSONNEL FOR TRAINING NEEDS	15	48	-33
A2 ASSIGN PERSONNEL TO DUTY POSITIONS	11	44	-33
B35 DIRECT SHOP MAINTENANCE ACTIVITIES	7	39	-32
B44 IMPLEMENT WORK METHODS	11	41	-30
A17 ESTABLISH WORK METHODS OR CONTROLS	8	37	-29

TABLE 10  
REPRESENTATIVE TASKS PERFORMED BY  
45134B/54B PERSONNEL  
(N=361)

<u>TASKS</u>	<u>MEMBERS PERFORMING</u>
E122 COMPLETE AF FORMS 2005 (ISSUE/TURN IN REQUEST)	89
G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU)	86
G257 REMOVE OR REPLACE LRU MINOR HARDWARE	86
F185 CLEAN SHOP FACILITIES	85
G235 ISOLATE MALFUNCTIONS WITHIN LRU TEST PACKAGES	76
F195 PACK OR UNPACK LRUs FOR STORAGE, SHIPMENT, OR CLIMATIC CONDITIONS	61
0653 REPAIR RADAR SYSTEM ANTENNAS	58
0651 PERFORM OPERATIONAL CHECKOUT OF RADAR SYSTEM LPVSS	57
S730 ISOLATE MALFUNCTIONS WITHIN ICCPs OR ICCP(HQ)s	55
S762 PERFORM OPERATIONAL CHECKOUT OF ICCPs OR ICCP(HQ)s	55
Q672 ALIGN AIR-TO-AIR IFF INTERROGATOR (AAI) LRUs	53
S718 ALIGN INTEGRATED COMMUNICATIONS CONTROL PANELS (ICCP) OR ICCP(HQ)	53
S794 REPAIR ICCPs OR ICCP(HQ)s	53
Q690 PERFORM OPERATIONAL CHECKOUT OF IFFs	49
E167 PERFORM ROUTINE INSPECTION OF TOOLS	48
P658 ISOLATE MALFUNCTIONS WITHIN ANTENNA A TEST STATIONS	47
S712 ADJUST CONTROLLER AIRCRAFT GRIP ASSEMBLIES	47
R703 PERFORM CONFIDENCE TEST OF COMMUNICATION, NAVIGATION, AND IDENTIFICATION (CNI) TEST STATIONS	46
T810 PERFORM CONFIDENCE TEST OF INDICATORS AND CONTROLS TEST STATIONS	41
V926 PERFORM TITE BASIC OA/FIs	34
F171 PROCESS DIFM ITEMS	33
D83 ANNOTATE TRAINING RECORDS	32
0858 PERFORM OPERATIONAL TEST OF AN/ALR-56 LOW BAND RECEIVER PROCESSORS	31
U867 REPAIR AN/ALQ-135 CONTROL OSCILLATORS	30
U820 ALIGN AN/ALQ-128 RECEIVER/TRANSMITTERS (R/T)	30
V896 DETERMINE WHETHER MALFUNCTIONS ARE IN TITE OR UUT	29

Average number of tasks performed-173

TABLE 11

TASKS WHICH BEST DIFFERENTIATE BETWEEN DAFSC 45134B/45154B and 45174 PERSONNEL  
(PERCENT MEMBERS PERFORMING)

<u>TASKS</u>	<u>DAFSC 45134B/ 45154B (N=361)</u>	<u>DAFSC 45134B/ 45174 (N=239)</u>	<u>DIFFERENCE</u>
S762 PERFORM OPERATIONAL CHECKOUT OF ICCPs OR ICCP(HQ)s	55	15	+39
S730 ISOLATE MALFUNCTIONS WITHIN ICCPs OR ICCP(HQ)s	55	17	+38
0651 PERFORM OPERATIONAL CHECKOUT OF RADAR SYSTEM LVPSs	57	19	+38
0655 REPAIR RADAR SYSTEM TRANSMITTERS	55	18	+37
Q685 PERFORM OPERATIONAL CHECKOUT OF AN/ARC-164 OR AN/ARC-164 (HQ) UHF RADIO R/Ts	54	12	+36
S754 PERFORM OPERATIONAL CHECKOUT OF CONTROLLER AIRCRAFT GRIP ASSEMBLIES	51	15	+36
0648 ISOLATE MALFUNCTIONS WITHIN RADAR SYSTEM LOW VOLTAGE POWER SUPPLIES (LVPS)	54	19	+35
Q674 ALIGN AN/ARN-118 TACTICAL AIR NAVIGATION (TACAN) R/Ts	53	19	+34
S757 PERFORM OPERATIONAL CHECKOUT OF FAN TURBINE INLET TEMPERATURE (FTIT) INDICATORS	49	15	+34
S792 REPAIR CONTROLLER AIRCRAFT GRIP ASSEMBLIES	49	15	+34
* * * * *	* * * * *	* * * * *	* * * * *
C79 WRITE APRS	25	74	-49
B31 COUNSEL PERSONNEL ON PERSONAL OR MILITARY-RELATED MATTERS	20	67	-47
B46 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	16	60	-44
C73 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS	22	64	-42
D83 ANNOTATE TRAINING RECORDS	32	73	-41
A5 COORDINATE MAINTENANCE WORK WITH APPROPRIATE PERSONNEL OR AGENCIES			
A20 PLAN OR SCHEDULE WORK ASSIGNMENTS	18	55	-37
D89 COUNSEL TRAINEES ON TRAINING PROGRESS	15	51	-36
A16 ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	25	61	-36
G245 PERFORM QA OR QC INSPECTION OF LRUs	11	44	-33
E177 REVIEW AFTO FORMS 244 AND 245	23	56	-33
	37	66	-29

TABLE 12  
REPRESENTATIVE TASKS PERFORMED BY  
45174 PERSONNEL  
(N=239)

<u>TASKS</u>	<u>MEMBERS PERFORMING</u>
C79 WRITE APRs	74
D83 ANNOTATE TRAINING RECORDS	73
E122 COMPLETE AF FORMS 2005 (ISSUE/TURN IN REQUEST)	73
A8 DETERMINE WORK PRIORITIES	67
E116 ANNOTATE OR COMPLETE AFTO FORMS 244 AND 245 (INDUSTRIAL/SUPPORT EQUIPMENT RECORD)	64
B46 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	60
G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU)	60
D86 CONDUCT OJT	60
E168 PERFORM SHIFT SECURITY CHECKS OF TOOLS AND EQUIPMENT	60
G245 PERFORM QA OR QC INSPECTION OF LRUs	56
A5 COORDINATE MAINTENANCE WORK WITH APPROPRIATE PERSONNEL OR AGENCIES	55
F196 PERFORM CORROSION CONTROL INSPECTIONS	53
A20 PLAN OR SCHEDULE WORK ASSIGNMENTS	52
C80 WRITE RECOMMENDATIONS FOR AWARDS AND DECORATIONS	52
D98 EVALUATE PERSONNEL FOR TRAINING NEEDS	48
G259 PLAN OR SCHEDULE WORK ASSIGNMENTS	48
C80 WRITE RECOMMENDATIONS FOR AWARDS AND DECORATIONS	45
D98 EVALUATE PERSONNEL FOR TRAINING NEEDS	44
G259 REMOVE OR REPLACE LRU TEST PACKAGE COMPONENTS	44
A2 ASSIGN PERSONNEL TO DUTY POSITIONS	44
E167 PERFORM ROUTINE INSPECTION OF TOOLS	44
F189 INTERPRET SYSTEM DIAGRAMS OR SCHEMATICS	41
G244 PERFORM QUALITY ASSURANCE (QA) OR QUALITY CONTROL (QC) INSPECTION OF LRU TEST PACKAGES	41
E171 PROCESS DIFM ITEMS	40
G247 PERFORM QA OR QC INSPECTION OF TEST STATION MAINTENANCE TEST PACKAGES (MTP)	38
B50 SUPERVISE AVIONICS AUTOMATIC TEST STATION AND COMPONENT SPECIALIST (AFSC 45154A)	37
B51 EVALUATE INSPECTION REPORT FINDINGS	28

Average number of tasks performed-164

### Summary

As members in the 451X4 career ladder progress to the 7-skill level, their jobs increase in supervisory duties, but remains somewhat technical. At the 3-/5-skill level, technical tasks occupy 73 (A-shred) or 71 (B-shred) percent of their job time decreasing to 38 percent at the 7-skill level, where supervisory duties occupy another 42 percent.

### ANALYSIS OF AFR 39-1 SPECIALTY DESCRIPTIONS

The results of the specialty job structure and skill-level analyses were compared to the AFR 39-1 Specialty Descriptions (dated 1 February 1988) for the F-15 Avionics Test Station and Component Specialty. A review of each specialty description indicates all are supported by survey data. However, the overall impression of the AFR 39-1 job descriptions for this career field is somewhat misleading by presenting a predominantly technical picture, failing to take into consideration any of the daily administrative, supply, and general shop tasks (Duties E and F) performed by all skill levels. These duties encompass from 14 percent (45134A/45154A) to 18 percent (45134B/45154B, and 45174) of these members' time. Duties dealing with annotating, initiating, and completing forms, maintaining records and files, and performing general shop duties should be included in the specialty descriptions to present a more accurate job description of this AFSC.

### TRAINING ANALYSIS

Occupational survey data provide one of several sources of information which can be used to make training programs more relevant and meaningful to first-term personnel. Factors useful for evaluating training include the description of the job being performed by first-enlistment members and their overall distribution across career ladder jobs, percentages of first-enlistment (1-48 months TAFMS) personnel performing specific tasks or using certain types of equipment, as well as TD ratings (previously explained in the SURVEY METHODOLOGY section). Additionally, a Training Requirements Analysis (TRA) is being done for this AFSC by the Training Development Services Division (OMT) of USAFOMC, and should be available to training personnel in April 1990. Although TE data is unavailable for this study, the TRA and TD data should provide technical school personnel with enough information to make training program decisions.

To assist in the evaluation of the STS and the POI, technical school personnel from Lowry Technical Training Center matched tasks from the AFSC 451X4 job inventory to appropriate sections of the STS and POIs for courses G3ABR45134A-000 and G3ABR45134B-000. This matching process allowed data comparisons to those documents to be made. Computer listings displaying STS

and POI matchings, percent members performing tasks, and TD ratings for each task, have been sent to the technical school for review. Some of this information is presented in the following pages.

#### First-Enlistment Personnel

There are 238 members in their first enlistment in this survey, representing 29 percent of the survey sample. Figure 2 shows the distribution of first-enlistment AFSC 451X4 personnel across career ladder jobs. Sixty-five percent are in the Manual or Electronic Warfare Test Station cluster, 29 percent are in the Automatic Test Station cluster, and small percentages are distributed throughout the rest of the other jobs shown. Automatic Test Station members spend the majority of their time maintaining computer test stations and assigned line replaceable units (LRUs) (19 percent) and performing general maintenance on test stations and assigned LRUs (16 percent). Manual or Electronic Warfare personnel spend the majority of their time maintaining indicators and controls test stations and assigned LRUs (17 percent), followed by maintaining TITE and assigned LRUs (14 percent) (see Table 13). Representative tasks performed by first-enlistment personnel are presented in Tables 14 and 15, and lists of equipment used by these personnel are presented in Tables 16 and 17.

#### Task Difficulty (TD)

While TE ratings were not available for this AFSC due to insufficient interrater agreement, TD data were collected and useable. Table 18 contains tasks that were rated most difficult by senior NCOs. More than half of those tasks dealt with isolating malfunctions in microwave and other test stations and in common automatic test equipment (CATE). Repairing, adjusting, and isolating malfunctions to heads-up display (HUD) units and managerial tasks were also considered very difficult.

#### Specialty Training Standard

A comprehensive review of STS 451X4, dated May 1987, compared STS items to survey data (with assistance from technical school personnel in matching job inventory tasks to STS elements). STS paragraphs containing general knowledge information, subject knowledge information, subject-matter-only knowledge requirements, or basic supervisory responsibilities were not examined. Task knowledge and performance elements of the STS were compared against the standards set forth in AFR 8-13 and in AFR 8-13/ATC Supplement 1.

Overall, the AFSC 451X4 STS is supported by survey data. STS elements having tasks matched to them that had less than 20 percent members performing are presented in Table 19.

**AFSC 451X4 FIRST TERM JOBS  
(N= 238)**

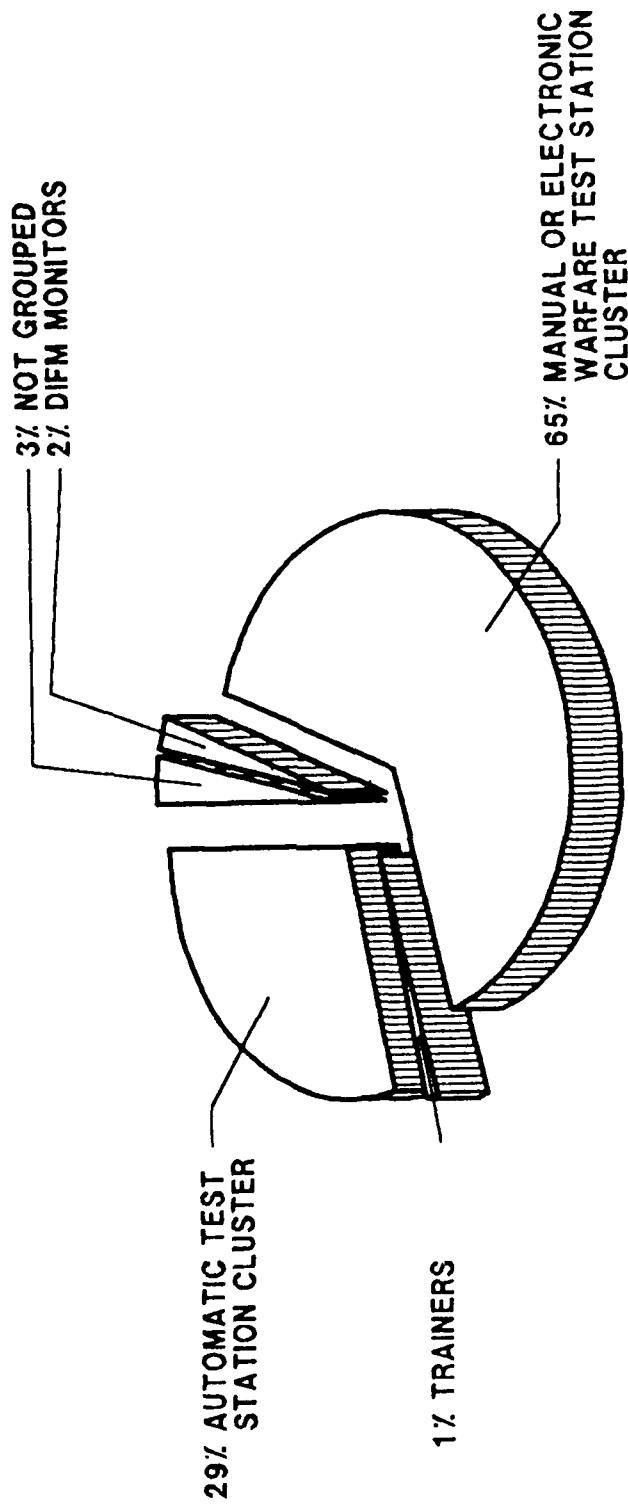


Figure 2

TABLE 13  
AVERAGE TIME SPENT ON DUTIES BY  
FIRST-ENLISTMENT PERSONNEL  
(PERCENT RESPONDING)

<u>JOB GROUPS</u>	<u>A-SHRED (N=68)</u>	<u>B-SHRED (N=170)</u>
A. ORGANIZING AND PLANNING	-	1
B. DIRECTING AND IMPLEMENTING	-	1
C. EVALUATING AND INSPECTING	-	*
D. TRAINING	-	1
E. PERFORMING GENERAL ADMINISTRATIVE AND SUPPLY TASKS	9	12
F. PERFORMING GENERAL AVIONICS SHOP TASKS	5	7
G. PERFORMING GENERAL MAINTENANCE ON TEST STATIONS AND LINE REPLACEABLE UNITS (LRU)	16	13
H. MAINTAINING COMPUTER TEST STATIONS ASSIGNED LRUs	19	*
I. MAINTAINING COMPUTER TEST STATIONS AND ASSIGNED TESTER REPLACEABLE UNITS (TRU)	4	*
J. MAINTAINING DISPLAYS TEST STATIONS ASSIGNED LRUs	14	*
K. MAINTAINING DISPLAYS TEST STATIONS AND ASSIGNED TRUs	5	*
L. MAINTAINING MICROWAVE TEST STATIONS ASSIGNED LRUs	8	*
M. MAINTAINING MICROWAVE TEST STATIONS AND ASSIGNED TRUs	6	*
N. MAINTAINING F-15 COMMON AUTOMATIC TEST EQUIPMENT (CATE)	11	*
O. MAINTAINING ANTENNA A AND B TEST STATIONS ASSIGNED LRUs	*	6
P. MAINTAINING ANTENNA A AND B TEST STATIONS AND ASSIGNED TRUs	*	4
Q. MAINTAINING COMMUNICATION, NAVIGATION, AND IDENTIFICATION (CNI) TEST STATIONS ASSIGNED LRUs	*	9
R. MAINTAINING COMMUNICATION, NAVIGATION, AND IDENTIFICATION (CNI) TEST STATIONS AND ASSIGNED TRUs	*	2
S. MAINTAINING INDICATORS AND CONTROLS TEST STATIONS ASSIGNED LRUs	*	17
T. MAINTAINING INDICATORS AND CONTROLS TEST STATIONS AND ASSIGNED TRUs	*	2
U. MAINTAINING TACTICAL ELECTRONIC WARFARE SYSTEMS (TEWS) INTERMEDIATE TEST EQUIPMENT (TITE) ASSIGNED LRUs	1	14
V. MAINTAINING TACTICAL ELECTRONIC WARFARE SYSTEMS (TEWS) INTERMEDIATE TEST EQUIPMENT (TITE) AND ASSIGNED TRUs	*	10
W. MAINTAINING ENGINE MONITORING SYSTEM TEST UNITS AND ASSIGNED LRUs	*	*
X. MAINTAINING ELECTRONIC COUNTERMEASURES (ECM) POD TEST STATIONS AND ECM PODS	-	-

\* Less than .5 percent  
- Nonresponse

TABLE 14

REPRESENTATIVE TASKS PERFORMED BY  
 451X4A FIRST-ENLISTMENT PERSONNEL  
 (N=68)

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU)	99
G257 REMOVE OR REPLACE LRU MINOR HARDWARE	97
E122 COMPLETE AF FORMS 2005 (ISSUE/TURN IN REQUEST)	94
G262 REMOVE OR REPLACE TEST PACKAGE PINS OR CONNECTORS	93
F185 CLEAN SHOP FACILITIES	90
G236 ISOLATE MALFUNCTIONS WITHIN PRINTERS	82
F220 SOLDER COMPONENTS SUCH AS RELAYS, RESISTORS, OR PLUGS	79
N620 PERFORM PERIODIC MAINTENANCE ON CABINET BLOWER FILTERS	76
H316 PERFORM PROGRAMMED TEST OF INERTIAL MEASUREMENT UNIT (IMU) LRUs	74
H289 ISOLATE MALFUNCTIONS WITHIN IMU LRUs	69
F184 CLEAN OPTICAL SURFACES OR CONTACTS	67
H318 PERFORM PROGRAMMED TEST OF LCG LRUs	66
E143 INVENTORY TOOLS, SUCH AS CONSOLIDATED TOOL KITS (CTK) AND TOOL ROOM CHITS	66
F189 INTERPRET SYSTEM DIAGRAMS OR SCHEMATICS	66
N643 REPAIR SWITCHING COMPLEXES	65
L522 PERFORM PROGRAMMED TEST OF 022 LRUs	60
M546 PERFORM CONFIDENCE TEST OF MTSs	59
L523 PERFORM PROGRAMMED TEST OF 039 LRUs	57
J407 ISOLATE MALFUNCTIONS WITHIN CONVERTER PROGRAMMER LRUs, OTHER THAN DURING ON-AIRCRAFT OPERATIONAL CHECKOUTS	57
J445 REPAIR HUD UNITS	56
J428 PERFORM PROGRAMMED TEST OF HUD SDP UNIT LRUs	54
N572 ADJUST DIGITAL INTERFACE ADAPTER (DIA) SRUs	53
M547 PERFORM MICROWAVE HARMONIZATION PROCEDURES	59
K488 PERFORM OA/FI OF DTS PULSGEN1	47
K489 PERFORM OA/FI OF DTS PULSGEN2	47
E166 PERFORM PERIODIC INSPECTION OF TOOLS	47
M557 PERFORM OA/FI OF NOISEANs	40
G245 PERFORM QA OR QC INSPECTION OF LRUs	38

Average number of tasks performed-207

TABLE 15  
REPRESENTATIVE TASKS PERFORMED BY  
451X4B FIRST-ENLISTMENT PERSONNEL  
(N=170)

<u>TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
E122 COMPLETE AF FORMS 2005 (ISSUE/TURN IN REQUEST)	93
G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU)	87
F185 CLEAN SHOP FACILITIES	86
E143 INVENTORY TOOLS, SUCH AS CONSOLIDATED TOOL KITS (CTK) AND TOOL ROOM CHITS	68
G227 INSPECT EQUIPMENT FOR CALIBRATION DATES	66
F214 REPAIR CABLE ASSEMBLIES, SUCH AS REPLACING PINS, WIRES, OR HARDWARE	61
O653 REPAIR RADAR SYSTEM ANTENNAS	59
O650 PERFORM OPERATIONAL CHECKOUT OF RADAR SYSTEM ANTENNAS	58
Q673 ALIGN AN/ARC-164 OR AN/ARC-164(HQ) ULTRAHIGH FREQUENCY (UHF) RADIO RECEIVER/TRANSMITTERS (R/T)	58
S730 ISOLATE MALFUNCTIONS WITHIN ICCPs OR ICCP(HQ)s	58
F203 PERFORM SAFETY WIRING	58
S754 PERFORM OPERATIONAL CHECKOUT OF CONTROLLER AIRCRAFT GRIP ASSEMBLIES	51
V727 ISOLATE MALFUNCTIONS WITHIN CONTROLLER AIRCRAFT GRIP ASSEMBLIES	50
S735 ISOLATE MALFUNCTIONS WITHIN MAIN COMMUNICATIONS CONTROL PANELS (MCCP)	49
P658 ISOLATE MALFUNCTIONS WITHIN ANTENNA A TEST STATIONS	46
R707 PERFORM OA/FI OF UHF CONTROL PANELS	45
P656 CALIBRATE ANTENNA A TEST STATIONS	43
S746 PERFORM OPERATIONAL CHECKOUT OF ALTITUDE INDICATORS	43
P657 CALIBRATE ANTENNA B TEST STATIONS	42
R704 PERFORM IDENTIFICATION FRIEND OR FOE (IFF) RADIO FREQUENCY (RF) LOSS CORRECTION CHART PROCEDURES	42
V926 PERFORM TITE BASIC OA/FIs	40
R708 PERFORM OA/FI OF TEST STATION CONTROL PANELS, OTHER THAN IFF, ILS, AND UHF CONTROL PANELS	40
S771 PERFORM OPERATIONAL CHECKOUT OF NOZZLE POSITION INDICATORS	38
U858 PERFORM OPERATIONAL TEST OF AN/ALR-56 LOW BAND RECEIVER PROCESSORS	37
V928 PERFORM TITE DAILY CONFIDENCE TESTS (DCT)	36
U849 PERFORM OPERATIONAL TEST OF AN/ALQ-135 CONTROL OSCILLATORS	36
T818 REPAIR RELAY ASSEMBLY GROUPS	36
V896 DETERMINE WHETHER MALFUNCTIONS ARE IN TITE OR UUT	35

Average number of tasks performed-147

TABLE 16

TEST EQUIPMENT USED OR MAINTAINED BY  
AFSC 451X4A FIRST-ENLISTMENT PERSONNEL  
(MORE THAN 20 PERCENT MEMBERS RESPONDING)

<u>EQUIPMENT</u>	1~48 TAFMS (N=68)
FREQUENCY COUNTER	96
DIGITAL MULTIMETER	96
OSCILLOSCOPE	93
PULSE GENERATOR	90
TORQUE WRENCH	85
DIGITAL VOLTMETER	84
THEODOLITE	78
SPECTRUM ANALYZER	76
SIGNAL GENERATOR	75
PHASEMETER	74
PHOTOMETER	65
POWER METER	62
ANALOG MULTIMETER	52
PRESSURE TESTER	28
DIGITAL LOGIC PROBE	22
REFLECTOMETER	21

TABLE 17

TEST EQUIPMENT USED OR MAINTAINED BY  
AFSC 451X4B FIRST-ENLISTMENT PERSONNEL  
(MORE THAN 20 PERCENT MEMBERS RESPONDING)

EQUIPMENT	1-48 TAFMS (N=170)
FREQUENCY COUNTER	95
DIGITAL MULTIMETER	94
OSCILLOSCOPE	94
POWER METER	89
TORQUE WRENCH	88
DIGITAL VOLTMETER	86
SPECTRUM ANALYZER	85
PULSE GENERATOR	80
SIGNAL GENERATOR	80
ANALOG MULTIMETER	69
SWEEP OSCILLOSCOPE	54
PRESSURE TESTER	30
CURRENT PROBE AMPLIFIER	29
DISC CLEANER	25

TABLE 18

## TASKS RATED HIGHEST IN TASK DIFFICULTY (TD)

TASKS	TASK DIFF*	PERCENT MEMBERS PERFORMING			
		1ST JOB A (N=32)	1ST ENL A (N=68)	1ST JOB B (N=66)	1ST ENL B (N=170)
A14 DRAFT BUDGET REQUIREMENTS	8.25	0	1	3	2
M539 ISOLATE MALFUNCTIONS WITHIN MSSUs	7.75	25	44	0	1
V924 ISOLATE TITE SOFTWARE MALFUNCTIONS	7.65	0	1	11	19
N589 ISOLATE MALFUNCTIONS WITHIN DIAs	7.54	59	65	0	1
J445 REPAIR HUD UNITS	7.52	41	56	0	1
C81 WRITE STAFF STUDIES, SURVEYS, OR SPECIAL REPORTS, OTHER THAN TRAINING REPORTS	7.52	0	1	3	2
R702 ISOLATE MALFUNCTIONS WITHIN ILS TEST SET LRUs TO BITS AND PIECES	7.49	0	0	29	30
P660 ISOLATE MALFUNCTIONS WITHIN ANTENNA B TEST STATION TRANSMITTER MOUNTING FIXTURES (TMF)	7.49	0	0	42	42
M538 ISOLATE MALFUNCTIONS WITHIN INTERMEDIATE FREQUENCY SIGNAL SOURCES (IFFS)	7.41	22	38	0	1
D91 DEVELOP CAREER DEVELOPMENT COURSE (CDC) MATERIALS	7.41	0	1	0	1
N588 ISOLATE MALFUNCTIONS WITHIN DATA COUPLERS	7.40	19	28	0	1
C80 WRITE RECOMMENDATIONS FOR AWARDS AND DECORATIONS	7.36	0	1	2	1
M547 PERFORM MICROWAVE HARMONIZATION PROCEDURES	7.33	38	50	0	1
D94 DEVELOP RESIDENT COURSE TRAINING MATERIALS	7.32	0	1	0	0
D92 DEVELOP NEW EQUIPMENT TRAINING PROGRAMS	7.30	0	1	0	1
N587 ISOLATE MALFUNCTIONS WITHIN COMPUTER CONTROL AND DISPLAY PANELS (CCDP)	7.26	56	63	0	1
G234 ISOLATE MALFUNCTIONS WITHIN COMPUTER TERMINALS	7.15	31	41	14	19
J401 ADJUST HEADS UP DISPLAY (HUD) UNIT SRUs	7.10	41	56	0	1
N590 ISOLATE MALFUNCTIONS WITHIN DIA AUX DRAWERS	7.06	38	51	0	1
N599 ISOLATE MALFUNCTIONS WITHIN SWITCHING COMPLEXES	7.05	47	60	0	1
V890 ALIGN SPECTRUM ANALYZER SYSTEMS	7.04	0	1	8	15
V882 ALIGN TITE DIGITAL PROCESSING OSCILLOSCOPES (DPO)	7.03	0	1	12	18
0647 ISOLATE MALFUNCTIONS WITHIN RADAR SYSTEM ANTENNAS	7.01	0	1	68	55
J413 ISOLATE MALFUNCTIONS WITHIN HUD UNIT LRUs	7.01	41	53	0	1
M544 ISOLATE MALFUNCTIONS WITHIN NOISE ANALYZERS (NOISEAN)	7.00	13	28	0	1
M545 ISOLATE MALFUNCTIONS WITHIN X-BAND SIGNAL SOURCES (XBSS)	6.99	22	34	0	1

\* Task Difficulty (TD) has an average of 5.0 and a Standard Deviation of 1.0

TABLE 19

## UNSUPPORTED AFSC 451X4 STS ELEMENTS

<u>ELEMENT AND MATCHED TASKS</u>	PERCENT RESPONDING					
	A-SHRED 1-24 TAFMS (N=32)	1-48 TAFMS (N=68)	451X4A (N=185)	B-SHRED 1-24 TAFMS (N=66)	451X4B (N=170)	45174 (N=257) TASK DIFF
4B. USE TECHNICAL ORDER (TO) INDEXES						
E159 MAINTAIN TECHNICAL ORDER FILES	3	12	18	3	8	14
4F. COMPUTER PROGRAM IDENTIFICATION NUMBER (CPIN)						
E155 MAINTAIN PUBLICATION FILES, OTHER THAN TECHNICAL ORDER FILES	0	4	5	0	2	4
III. IDENTIFY TEST EQUIPMENT CATEGORIES						
F188 IDENTIFY TEST EQUIPMENT CATEGORIES	13	16	14	17	18	14
					11	4.03

While there was good support for the STS elements, there are a number of tasks performed by high percentages of first-enlistment 451X4 airmen that are not matched to any STS elements (a sample is provided in Table 20). The tasks deal primarily with the technical aspects of the job, with Duty G, performing general maintenance on test stations and assigned LRUs, the predominant non-referenced task area. School personnel need to review all the unmatched tasks listed at the end of the STS product in the Training Extract to determine if they suggest topics that need to be included in the STS.

The final step of this STS analysis was to review the 3-skill level training codes assigned to the supported elements. Following guidelines set forth in AFR 8-13 and ATCR 55-22, performance training codes for supported elements are appropriate if matched tasks are performed by 30 percent or more of first-enlistment airmen. Elements matched to tasks performed by less than 30 percent are normally dashed (-), unless there is good justification for them to be taught to the performance level.

Given this guidance, five STS elements had 3-level course codes which were not supported by survey data. Each of the following STS elements had tasks matched to them with less than 30 percent members performing, which suggests the code should be changed to a dash (-).

<u>STS ELEMENT</u>	3-Skill Level Code	PERCENT PERFORMING				TASK DIFF
		TAFMS (A) 1-24	TAFMS (A) 1-48	TAFMS (B) 1-24	TAFMS (B) 1-48	
4d. Report TO Deficiencies	2b	6	16	23	23	4.82
10b. Inspection Systems	B	16	21	11	22	4.04
30d(1) Isolate Malfunctions: VU/DM	b	16	25	0	0	6.96
31c(5) Perform Test Procedures: 041	2b	22	25	0	6	5.15
31d(5) Isolate Malfunctions: 041	b	22	25	0	1	5.10

The following elements are coded at the (b) level, but are performed by 50 percent or more first-term personnel, suggesting the code should be increased to the 1a or 2b level.

TABLE 20  
SAMPLE OF TASKS NOT MATCHED TO 451X4 STS

TASKS	PERCENT PERFORMING						
	A-SHRED 1-24 TAFMS (N=32)	1-48 TAFMS (N=68)	451X4A (N=185)	B-SHRED 1-24 TAFMS (N=66)	451X4B (N=257)	45174 (N=239)	TASK DIFF
G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU)	100	99	89	88	87	86	59
G258 REMOVE OR REPLACE LRU PINS OR CONNECTORS	91	94	83	80	84	82	52
G259 REMOVE OR REPLACE LRU TEST PACKAGE COMPONENTS	81	90	79	59	71	71	48
F214 REPAIR CABLE ASSEMBLIES, SUCH AS REPLACING PINS, WIRES, OR HARDWARE							
G237 ISOLATE MALFUNCTIONS WITHIN TEST STATION INTERFACE ADAPTERS	78	71	57	64	61	63	34
E113 ANNOTATE AFTO FORMS 95 (SIGNIFICANT HISTORICAL DATA)	69	79	76	39	51	57	40
F189 INTERPRET SYSTEM DIAGRAMS OR SCHEMATICS E116 ANNOTATE OR COMPLETE AFTO FORMS 244 AND 245 (INDUSTRIAL/SUPPORT EQUIPMENT RECORD)	59	66	66	52	60	70	61
	34	35	60	26	40	62	64
	34	49	64	0	1	7	17
N574 ADJUST EXTERNAL SAMPLING HEAD SRUS	28	40	39	0	0	5	10
J436 PERFORM PROGRAMMED TEST OF VSD SDP LRUS							
M545 ISOLATE MALFUNCTIONS WITHIN X-BAND SIGNAL SOURCES (XBSS)	22	34	49	0	1	5	13
H342 REPAIR IMU BATTERY TEST SETS	13	34	51	0	1	7	14
Q683 ISOLATE MALFUNCTIONS WITHIN ILS RADIO RECEIVERS	0	0	3	50	46	48	16
P671 SERVICE ANTENNA B TEST STATION TMFS	0	0	3	47	44	45	16
S716 ALIGN FUEL QUANTITY INDICATORS	0	1	2	41	38	40	14
S717 ALIGN GENERATOR CONTROL UNITS (GCU)	0	0	2	29	35	40	11
U860 PERFORM OPERATIONAL TEST OF AN/ALR-56 RECEIVER CONTROLS	0	3	2	18	30	27	8
V903 ISOLATE MALFUNCTIONS WITHIN TITE COAXIAL SWITCHINGS	0	3	2	17	30	26	9

<u>STS ELEMENTS</u>	PERCENT PERFORMING				TASK DIFF
	TAFMS 1-24	TAFMS 1-48	TAFMS 1-24	TAFMS 1-48	
14d(2). Isolate Malfunctions: AAI	0	0	64	57	6.54
14d(7). Isolate Malfunctions: AN/ARN-118	0	0	56	53	5.56
15d(12). Isolate Malfunctions: Integrated Communications Control Panel (HQ)	0	1	62	58	5.33
16d. Isolate Malfunctions of:					
(1). LVPS	0	1	67	55	4.56
(2). Radar Antenna	0	1	68	55	7.02
(3). Radar Transmitter	0	1	65	55	6.68
27c. Isolate Malfunctions of:					
(1). CCDP	56	63	0	1	7.26
(12). DIAs	59	65	0	8	7.54
(15). Switching Complex	47	60	0	1	7.05
29d(1). Isolate Malfunctions: 022	53	62	0	1	5.95
33d(4). Isolate Malfunctions: IMU	53	69	0	2	5.73

The following elements are coded at the 2b level, but are performed by less than 50 percent of first-term personnel, suggesting they should be downgraded to the 1a or b level.

<u>STS ELEMENTS</u>	PERCENT PERFORMING				TASK DIFF
	TAFMS (A) 1-24	TAFMS (A) 1-48	TAFMS (B) 1-24	TAFMS (B) 1-48	
15c(10). Test: Caution Light Logic Unit	0	0	39	39	3.92
21a(3)(a). Test: Low Band Receiver Processor	0	3	21	37	6.53
21b(3)(a). Test: Receiver/Transmitter	0	3	20	36	5.83
21c(3)(c). Test: Control Oscillators (additional matched task for above element)	0	3	23	37	6.07
27b(4). Test: Printer	25	40	0	0	4.58
27b(6). Test: PDP	22	40	0	1	4.33
28c(9). Perform OA/FI: SPECAN	22	38	2	2	4.45
30c(1). Perform OA/FI: VU/DM	19	37	0	1	5.93
30c(3). Perform OA/FI: FMNA	16	40	0	1	5.03
32c(10). Perform OA/FI: Rate Table	22	34	0	1	5.01
32f(2). Use Clinometer to Level: Scorsby Table	25	38	0	1	6.13

There are approximately 180 STS elements that are dashed (-), but have tasks matched to them with more than 30 percent members performing from the criterion group. These tasks should have a proficiency code assigned and careful consideration should be made to determine if these elements should be taught at the technical school. There were additional dashed (-) elements having tasks matched with high percent members performing dealing with repair, but could not be taught at the technical school without the possibility of

equipment damage. In addition to the STS elements mentioned, subject-matter experts should review all STS elements to determine appropriateness of the codes for 3-level training.

#### Plans of Instructions

Based on the previously mentioned assistance from technical school personnel in matching inventory tasks to both 45134 POIs, computer products were generated displaying the results of that matching process. These products were analyzed to identify objectives matched to tasks performed by 30 percent or more of respondents from either TAFMS group. Information furnished for consideration includes percent members performing data for first-job (1-24 months TAFMS) and first-enlistment (1-48 months TAFMS) personnel, as well as task difficulty (TD) ratings for individual tasks. Each POI will be discussed separately below.

3ABR45134A Plan of Instruction. There was a very good match of tasks to this POI. Every objective that had tasks matched to it had 30 percent or more of first-term or first-enlistment personnel performing, with two exceptions (see Table 21). These two objectives should be reviewed to ensure they are necessary training items.

There are a number of tasks performed by more than 30 percent of first-enlistment AFSC 45134A airmen that are not matched to any POI objective. Samples of these tasks are listed in Table 22. Most of these tasks deal with performing programmed tests, isolating malfunctions, repairing components, performing operational assurance/fault isolation (OA/FI), aligning, and adjusting. Technical school personnel should review these tasks to determine if they should be incorporated into the training program.

3ABR45134B Plan of Instruction. This match revealed several POI learning objectives having tasks matched that had less than 30 percent first-term or first-enlistment members performing. Additional information is provided in Table 23. These objectives should be carefully reviewed by technical school personnel to ensure they are appropriate for training.

There are also a number of tasks performed by 30 percent or more of first-term and first-enlistment personnel not matched to POI objectives. Examples of these tasks are provided in Table 24. The majority of these tasks deal with repairing, removing, replacing, isolating malfunctions, adjusting, performing operational checkout, and aligning. As with the A-shred course, many of these functions cannot be taught without damaging the training equipment and therefore may be inappropriate for adding to the course.

#### Summary

Overall there are good matches to each POI. The majority of tasks not matched having high percentages of first-term and first-enlistment personnel performing are difficult to teach at technical school due to equipment and

TABLE 21  
UNSUPPORTED ABR45134A POI LEARNING OBJECTIVES

ABR45134A POI OBJECTIVES AND MATCHED TASKS	PERCENT PERFORMING		
	1-24 TAFMS (N=32)	1-48 TAFMS (N=68)	TASK DIFF
III 8B. GIVEN APPLICABLE INFORMATION AND SELECTED MAINTENANCE TASKS, MATCH EACH TASK TO ITS PROPER LEVEL OF MAINTENANCE	13	16	4.03
F188 IDENTIFY TEST EQUIPMENT CATEGORIES			
VII 2A. GIVEN TO 12P2-2APG63-48-1, PERFORM PROGRAMMED TEST PROCEDURES ON THE 041.	22	25	5.15
J437 PERFORMED PROGRAMMED TEST OF 041 LRUs			

TABLE 22  
SAMPLE TASKS NOT MATCHED TO ABR45134A POI

TASKS	PERCENT PERFORMING		
	1-24 TAFMS (N=32)	1-48 TAFMS (N=68)	TASK DIFF
G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU)	100	99	2.64
G265 REMOVE OR REPLACE TEST STATION LIGHT BULBS, FUSES, OR OTHER MINOR HARDWARE	97	96	1.92
G262 REMOVE OR REPLACE TEST PACKAGE PINS OR CONNECTORS	91	93	4.77
G231 INSPECT, CLEAN, OR ADJUST TEST STATION LINE PRINTERS	84	88	5.18
G241 PERFORM PERIODIC MAINTENANCE ON MTTUs	75	85	4.35
E113 ANNOTATE AFTO FORMS 95 (SIGNIFICANT HISTORICAL DATA)	69	74	3.09
N620 PERFORM PERIODIC MAINTENANCE ON CABINET BLOWER FILTERS	66	74	2.62
F183 CLEAN AND LUBRICATE EQUIPMENT COMPONENTS	78	71	3.26
H340 REPAIR IMUS	53	71	5.06
F184 CLEAN OPTICAL SURFACES OR CONTACTS	63	68	3.04
H287 ISOLATE MALFUNCTIONS WITHIN ELECTRONIC AIR INLET CONTROLLER (EAIC) LRUs	44	65	5.07
N643 REPAIR SWITCHING COMPLEXES	50	65	6.62
H298 ISOLATE MALFUNCTIONS WITHIN SIGNAL DATA RECORDER (SDR) LRUs	44	63	5.72
H338 REPAIR EAICs	44	63	4.74
J425 PERFORM PROGRAMMED TEST OF CONVERTER PROGRAMMER LRUs	47	62	4.96
I376 PERFORM CONFIDENCE TEST OF CTSS	44	60	3.72
L515 ISOLATE MALFUNCTIONS WITHIN RADAR DATA PROCESSOR (081) LRUs	50	60	5.76
L530 REPAIR O39	50	60	4.93
K483 PERFORM CONFIDENCE TEST OF DTSS	44	59	4.09
L521 PERFORM PROGRAMMED TEST OF RFO LRUs	47	57	5.46

TABLE 23

## UNSUPPORTED ABR45134B POI LEARNING OBJECTIVES

<u>ABR45134B POI OBJECTIVES AND MATCHED TASKS</u>	<u>PERCENT PERFORMING</u>		
	<u>1-24 TAFMS (N=66)</u>	<u>1-48 TAFMS (N=177)</u>	<u>TASK DIFF</u>
II 5A. GIVEN TO 00-5-1, DESCRIBE THE FUNCTION AND APPLICATION OF THE TECHNICAL ORDER SYSTEM	23	23	4.82
E140 INITIATE OR REVIEW TECHNICAL ORDER SYSTEM FORMS			
II 5B. GIVEN TOS 0-1-01, 0-1-5-2, 0-1-12, 0-1-33-3 AND EXTRACTS FROM TO 00-5-2, LOCATE AND LIST THE TITLES OF SELECTED TOS	23	23	4.82
E140 INITIATE OR REVIEW TECHNICAL ORDER SYSTEM FORMS			
II 5C. GIVEN TOS 00-5-1, 0-1-33-3, AND A HYPOTHETICAL TO DEFICIENCY, INITIATE A TECHNICAL ORDER SYSTEM IMPROVEMENT	23	23	4.82
E140 INITIATE OR REVIEW TECHNICAL ORDER SYSTEM FORMS			
II 7B. GIVEN EXTRACTS FROM TO AFM 66-279, IDENTIFY THE PURPOSE AND GENERAL FUNCTION OF THE CORE AUTOMATED MAINTENANCE SYSTEM (CAMS)	23	23	4.82
E118 ANNOTATE, INITIATE, OR COMPLETE AFTO FORMS 349-3 (MAINTENANCE DATA COLLECTION RECORD (AUTOMATED))	9	10	3.67
II 7F. GIVEN TO 00-35D-54, IDENTIFY THE BASIC TERMS AND FACTS OF THE USAF MATERIAL DEFICIENCY REPORTING (MDR) SYSTEM			
E173 REPORT MATERIAL DEFICIENCIES	18	28	4.98
E139 INITIATE OR COMPLETE DEFICIENCY, SERVICE, OR STATUS REPORTS	14	22	4.32

TABLE 23 (CONTINUED)  
UNSUPPORTED ABR45134B POI LEARNING OBJECTIVES

		PERCENT PERFORMING		
		1-24 TAFMS (N=66)	1-48 TAFMS (N=177)	TASK DIFF
<b>ABR45134B POI OBJECTIVES AND MATCHED TASKS</b>				
III 4.	GENERATOR CONTROL UNIT (GCU) CONTROL PANEL, MANUAL SIGNAL GENERATOR AND MANUAL STIMULUS ASSEMBLY			
T806	ISOLATE MALFUNCTIONS WITHIN GENERATOR CONTROL UNIT (GCU) CONTROL PANELS	18	29	6.45
T807	ISOLATE MALFUNCTIONS WITHIN MANUAL SIGNAL GENERATORS	17	28	5.93
T808	ISOLATE MALFUNCTIONS WITHIN MANUAL STIMULUS ASSEMBLIES	18	29	5.96
XIII 2A.	GIVEN TO 33D7-38-77-8-1-1, AND A LIST OF STEPS FOR DISC LOADING AND REVISION FROM PUNCHED TAPE, PLACE THE STEPS IN ORDER OF SEQUENCE TO PERFORM DISC LOADING AND REVISION FROM PUNCHED TAPE			
V930	PERFORM TITE DISC REVISIONS FROM PUNCHED TAPES	11	21	5.06
V897	EDIT TITE DISC FILE FROM PUNCHED TAPE	6	14	5.92
XIII 3A.	GIVEN TO 12P3-2A1R56-18-1-2, IDENTIFY THE CHARACTERISTICS OF PROGRAM FLOWCHARTS.			
V924	ISOLATE TITE SOFTWARE MALFUNCTIONS	11	19	7.66

TABLE 24

## SAMPLE TASKS NOT MATCHED TO ABR45134B POI

TASKS	PERCENT PERFORMING			
	1-24 TAFMS (N=66)	1-48 TAFMS (N=170)	TAFMS	TASK DIFF
G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU)	88	87	87	2.64
G257 REMOVE OR REPLACE LRU MINOR HARDWARE	88	87	87	3.21
F185 CLEAN SHOP FACILITIES	86	86	86	1.88
G240 PERFORM PERIODIC INSPECTION OF TEST STATIONS	85	84	84	4.14
G235 ISOLATE MALFUNCTIONS WITHIN LRU TEST PACKAGES	68	74	74	6.49
E143 INVENTORY TOOLS, SUCH AS CONSOLIDATED TOOL KITS (CTK) AND TOOL ROOM CHITS	68	68	68	2.99
F183 CLEAN AND LUBRICATE EQUIPMENT COMPONENTS	65	65	65	3.26
F214 REPAIR CABLE ASSEMBLIES, SUCH AS REPLACING PINS, WIRES, OR HARDWARE	64	61	61	5.01
Q653 REPAIR RADAR SYSTEM ANTENNAS	71	59	59	6.76
Q673 ALIGN AN/ARC-164 OR AN/ARC-164(HQ) ULTRAHIGH FREQUENCY (UHF) RADIO RECEIVER/TRANSMITTERS (R/T)	70	58	58	5.74
F203 PERFORM SAFETY WIRING	67	58	58	3.60
Q685 PERFORM OPERATIONAL CHECKOUT OF AN/ARC-164 OR AN/ARC-164(HQ) UHF RADIO R/Ts	64	56	56	5.32
Q694 REPAIR AAIs	64	56	56	5.58
S718 ALIGN INTEGRATED COMMUNICATIONS CONTROL PANELS (ICCP) OR ICCP(HQ)	58	55	55	4.80
S794 REPAIR ICCPs OR ICCP(HQ)s	56	55	55	4.71
G226 FABRICATE OR REBUILD AVIONICS CABLES	30	49	49	5.73
Q677 ALIGN INSTRUMENT LANDING SYSTEM (ILS) RADIO RECEIVERS	55	48	48	5.54
Q683 ISOLATE MALFUNCTIONS WITHIN ILS RADIO RECEIVERS	50	46	46	5.72
P665 REPAIR ANTENNA A TEST STATIONS	45	45	45	5.66
S712 ADJUST CONTROLLER AIRCRAFT GRIP ASSEMBLIES	47	45	45	4.39

time limitations and risking damage to equipment. Even with these shortcomings, it is important that technical instructors and subject-matter experts take a careful look at all tasks to identify where training can be improved to better meet the needs of the operational Air Force. The data presented in both this OSR and the upcoming TRA should help accomplish this review.

#### Electronic Principles Inventory (EPI)

The Electronic Principles Inventory (EPI) (AFPT 90-EPI-825) contains 712 electronic principles, skills, and equipment questions covering 39 electronic principle subject areas. Between September 1987 and April 1988, the EPI was administered to fully-qualified 5-skill level 451X4 personnel who responded "Yes" or "No" to the 712 EPI items, indicating the electronic principles, skills, and equipment they use in their present job. Additionally, subject-matter experts matched the 712 EPI items to the 451X4 STS, Attachment 2, creating an EPI document to which the 451X4 criterion groups responses are added, and the final product analyzed.

Overall, there was good support for STS Atch 2; however, there were 19 areas that were not supported by the 451X4 criterion groups. That is, for these 19 line items listed below, less than 30 percent of either the 451X4A or 451X4B criterion groups responded "Yes" to the matched EPI items. These items should be considered for deletion from the 451X4 STS Atch 2, or the proficiency codes should be changed.

<u>STS Atch 2 line item (paragraph)</u>	<u>STS PROFICIENCY CODE</u>
13b. Isolate faulty AC generators	2b
15c. Troubleshoot synchro/servos	2b
16a. Theory of chopper operation	B
16b. Isolate faulty choppers	2b
19c. Solid state diode specifications	B
20c. Bipolar junction transistor specifications	B
27i. Use capacitor tester	2b
27n. Use logic pulser	2b
27o. Use logic analyzer	2b
27p. Use signature analyzer	2b
35c. Troubleshoot resistive/capacitive/inductive (RCL) circuits	2b
36b. Isolate faulty frequency sensitive filters	2b
36c. Troubleshoot frequency sensitive filter circuits	2b
37c. Troubleshoot wave generating circuits	2b
39b. Isolate faulty clamps	2b
42b. Boolean equation to diagram	B
47b. Perform transmission line measurements	2b
50a. Theory of resonant cavity operation	B
51a(4). Theory of pulse modulation operation	B

In addition to those line items listed above, the following STS Atch 2 line items were not supported by the members of the 45154A criterion group.

<u>STS Atch 2 line item (paragraph)</u>	<u>STS PROFICIENCY CODE</u>
23a. Theory of electron tube operation	B
51a(1). Theory of Amplitude Modulation operation (Rx)	B
51a(2). Theory of Frequency Modulation operation (Rx)	B
52a(1). Theory of Amplitude Modulation operation (Tx)	B
52b. Isolate faulty receivers	2b
54a. Theory of antenna operation	B

Additionally, the following STS Atch 2 line items were not supported by members of the 45154B criterion group.

<u>STS Atch 2 line item (paragraph)</u>	<u>STS PROFICIENCY CODE</u>
17a. Theory of transducer operation	B
17b. Isolate faulty transducers	2b
27h. Use digital logic probe	2b
38b. Isolate faulty limiters	2b
39a. Theory of clamper circuit operation	B
42a. Diagram to Boolean equation	B
43e. Computer circuit troubleshooting	2b
44a. Theory of microprocessor controlled system operation	B
44b. Isolate faulty microprocessors	2b
45a(3). Combinational Logic Circuits	B

During the EPI analysis we also look at the STS Atch 2 line items that have no proficiency codes, but are performed by more than 30 percent of the 45154A/B criterion group. The following line items had more than 30 percent members performing from both the 45154A and 45154B criterion groups and should be carefully reviewed for possible inclusion in formal technical school curriculum.

<u>STS Atch 2 line item (paragraph)</u>	<u>STS PROFICIENCY CODE</u>
5c. Solenoid theory of operation	-
5d. Isolate faulty solenoids	-
9b. Isolate faulty three phase transformers	-
25d. Solder/resolder coaxial connectors	-
30b. Isolate faulty Op Amps	-
43h. Programming computer languages	-

In addition to the above list, the following EPI objectives were performed by more than 30 percent of the 45154B criterion group.

<u>STS Atch 2 line item (paragraph)</u>	<u>STS PROFICIENCY CODE</u>
23b. Isolate faulty electron tubes	-
29a. Theory of electron tube amplifier operation	-
51b. Isolate faulty transmitters	-
54b. Perform antenna alignments	-
54c. Isolate faulty antennas	-

#### Summary

EPI data were well-supported by members of the 451X4 criterion groups. There were, however, some areas that should be reviewed for possible removal from, or inclusion in formal technical school curriculum.

#### JOB SATISFACTION ANALYSIS

An important part of the OSR process involves the analysis of job satisfaction data. These data can be used by career ladder managers to gain a better understanding of those factors affecting job performance of AFSC 451X4 personnel. This survey compared job satisfaction indicators on three levels. Table 25 displays job satisfaction indicators for AFSC 451X4 TAFMS groups and a comparative sample of other mission equipment maintenance personnel career ladders surveyed in 1988. Tables 26 and 27 compare the job satisfaction indicators and reenlistment intentions for the current survey and the previous AFSC 326XX surveys. Table 28 compares the job satisfaction indicators and reenlistment intentions for the specialty job groups within the 451X4 career ladder.

Job interest and job satisfaction for Automatic Test Station personnel were lower than Manual or Electronic Warfare personnel for both 1-48 and 49-96 TAFMS groups. The comparative sample of mission equipment support personnel fell in between the shred groups, and there was a trend of decreasing job interest and satisfaction as time increased in the 451X4 career ladder. Utilization of talents and training was higher than the comparative sample for all groups except the 97+ month TAFMS group and positive reenlistment intentions were slightly lower than the comparative sample for all groups across the board. Although the job becomes less interesting as time goes by, positive reenlistment intentions indicate that personnel are choosing reenlistment over separation.

TABLE 25

COMPARISON OF AFSC 451X4 JOB SATISFACTION INDICATORS BY TAFMS GROUPS  
(PERCENT MEMBERS RESPONDING)\*

	1-48 MONTHS TAFMS			49-96 MONTHS TAFMS			97+ MONTHS TAFMS		
	451X4A (N=68)	451X4B (N=170)	SAMPLE** (N=6,152)	451X4A (N=97)	451X4B (N=123)	SAMPLE (N=4,464)	45174 (N=107)	COMP SAMPLE (N=6,451)	COMP SAMPLE (N=6,451)
<u>EXPRESSED JOB INTEREST:</u>									
INTERESTING	68	79	73	65	63	71	56	73	
SO-SO	18	15	17	20	24	16	24	16	
DULL	15	6	10	15	14	12	20	10	
<u>PERCEIVED UTILIZATION OF TALENTS:</u>									
FAIRLY WELL TO PERFECTLY	82	82	80	76	80	78	74	79	
LITTLE OR NOT AT ALL	18	18	19	24	20	22	26	20	
<u>PERCEIVED UTILIZATION OF TRAINING:</u>									
FAIRLY WELL TO PERFECTLY	88	83	82	88	80	74	70	73	
LITTLE OR NOT AT ALL	12	17	18	12	20	26	29	26	
<u>SENSE OF ACCOMPLISHMENT:</u>									
SATISIFIED	78	79	72	70	79	66	56	67	
NEUTRAL	7	7	12	9	9	12	10	11	
DISSATISFIED	15	14	16	21	23	21	33	22	
<u>REENLISTMENT INTENTIONS:</u>									
YES, OR PROBABLY YES	57	52	59	68	59	69	64	74	
NO, OR PROBABLY NO	43	48	40	32	41	30	34	31	
PLAN TO RETIRE	0	0	0	0	0	0	1	14	

\* Columns may not add to 100 percent due to nonresponse or rounding  
 \*\* Includes Mission Equipment Maintenance AFSCS 302X0, 304X0/X1, 306X0/X3, 321X0, 328X0/X1, 411X0B/C, 427X1, 431X1/X2/X3/X4, and 464X0 surveyed in 1988.

TABLE 26

COMPARISON OF JOB SATISFACTION INDICATORS FOR CURRENT AFSC 451X4 SURVEY  
AND 1982 AFSC 326X4B SURVEY ACROSS TAFMS GROUPS  
(PERCENT MEMBERS RESPONDING)\*

	<u>1-48 MONTHS TAFMS</u>	<u>49-96 MONTHS TAFMS</u>	<u>97+ MONTHS TAFMS</u>	
<u>EXRESSED JOB INTEREST:</u>	<u>451X4A (N=68)</u>	<u>326X4B (N=151)</u>	<u>451X4A (N=97)</u>	<u>326X4B (N=48)</u>
<u>INTERESTING</u>	68	73	65	60
<u>SO-SO</u>	18	17	20	19
<u>DULL</u>	15	10	15	19
<u>PERCEIVED UTILIZATION OF TALENTS:</u>				
<u>FAIRLY WELL TO PERFECTLY</u>				
<u>LITTLE OR NOT AT ALL</u>				
<u>PERCEIVED UTILIZATION OF TRAINING:</u>				
<u>FAIRLY WELL TO PERFECTLY</u>				
<u>LITTLE OR NOT AT ALL</u>				
<u>SENSE OF ACCOMPLISHMENT:</u>				
<u>SATISIFIED</u>	78	66	70	50
<u>NEUTRAL</u>	7	11	9	12
<u>DISSATISFIED</u>	15	23	21	37
<u>REENLISTMENT INTENTIONS:</u>				
<u>YES, OR PROBABLY YES</u>	57	26	68	26
<u>NO, OR PROBABLY NO</u>	43	72	32	71
<u>PLAN TO RETIRE</u>	0	0	0	0

\* Columns may not add to 100 percent due to nonresponse or rounding

TABLE 27

COMPARISON OF JOB SATISFACTION INDICATORS FOR CURRENT AFSC 451X4 SURVEY  
 AND 1981 AFSC 326X3B AND AFSC 326X5B SURVEYS  
 (PERCENT MEMBERS RESPONDING)\*

	1-48 MONTHS TAFMS			49-96 MONTHS TAFMS			97+ MONTHS TAFMS		
	451X4B (N=170)	326X3B (N=75)	325X5B (N=75)	451X4B (N=123)	326X3B (N=11)	326X5B (N=30)	451X4B (N=107)	326X3B (N=10)	326X5B (N=13)
<u>EXPRESSED JOB INTEREST:</u>									
INTERESTING	79	71	56	63	55	70	56	50	62
SO-SO	15	16	25	24	18	20	24	30	31
DULL	6	13	19	14	27	10	20	20	8
<u>PERCEIVED UTILIZATION OF TALENTS:</u>									
FAIRLY WELL TO PERFECTLY	82	76	56	80	64	73	74	50	69
LITTLE OR NOT AT ALL	18	24	44	20	36	27	26	50	31
<u>PERCEIVED UTILIZATION OF TRAINING:</u>									
FAIRLY WELL TO PERFECTLY	83	59	67	80	64	63	70	70	62
LITTLE OR NOT AT ALL	17	40	33	20	36	37	29	30	38
<u>SENSE OF ACCOMPLISHMENT:</u>									
SATISIFIED	79	63	43	79	45	63	56	30	69
NEUTRAL	7	12	16	9	0	13	10	20	0
DISSATISFIED	14	24	44	23	55	23	33	50	31
<u>REENLISTMENT INTENTIONS:</u>									
YES, OR PROBABLY YES	52	27	31	59	36	40	64	70	77
NO, OR PROBABLY NO	48	73	69	41	64	56	34	30	23
PLAN TO RETIRE	0	0	0	0	0	3	1	0	0

\* Columns may not add to 100 percent due to nonresponse or rounding

TABLE 28

COMPARISON OF JOB SATISFACTION INDICATORS FOR SPECIALTY JOB GROUPS  
(PERCENT MEMBERS RESPONDING)\*

	INDEPENDENT JOB TYPES					
	AUTOMATIC TEST STATION CLUSTER (N=265)	MANUAL/EW TEST STATION CLUSTER (N=373)	SUPERVISORY CLUSTER (N=76)	TRAINING CLUSTER (N=40)	DIFM MONITORS (N=11)	QA/QC INSPECTORS (N=8)
<u>EXPRESSED JOB INTEREST:</u>						
INTERESTING	67	72	74	45	55	75
SO-SO	20	19	16	25	18	0
DULL	13	10	11	30	27	25
<u>PERCEIVED UTILIZATION OF TALENTS:</u>						
FAIRLY WELL TO PERFECTLY LITTLE OR NOT AT ALL	80 19	81 19	79 21	57 42	64 36	75 25
<u>PERCEIVED UTILIZATION OF TRAINING:</u>						
FAIRLY WELL TO PERFECTLY LITTLE OR NOT AT ALL	86 14	81 19	75 25	75 25	45 55	87 12
<u>SENSE OF ACCOMPLISHMENT:</u>						
SATISIFIED	71	72	57	42	55	62
NEUTRAL	9	8	7	20	18	12
DISSATISFIED	19	20	37	37	27	25
<u>REENLISTMENT INTENTIONS:</u>						
YES, OR PROBABLY YES NO, OR PROBABLY NO PLAN TO RETIRE	63 35 1	61 39 0	75 11 14	60 40 0	73 27 0	100 0 0

\* Columns may not add to 100 percent due to nonresponse or rounding

Comparisons between the current and previous surveys show a substantial improvement in all areas for first- and second-term personnel, with the exception of job interest. The most notable improvements, with one exception, are in reenlistment intentions, indicating an average increase of 27 percentage points. The only drop in reenlistment intentions was in the 97+ month 326X3/X5 comparison (6 and 13 percent, respectively). Current job interest took a middle-of-the-road stance compared to the previous survey and indicated no new trends.

Job satisfaction indicators for the specialty job groups were generally positive for all groups. With the exception of reenlistment intentions, responses for the Training cluster and DIFM IJT were lower than the other groups.

Total job satisfaction for the 451X4 career ladder is positive, with few exceptions. Changes in the career ladder as a result of Rivet Workforce initiatives are possibly the cause for low job interest and sense of accomplishment, especially for 7-level personnel who are now responsible for more types of equipment than before, require additional training, and have the feeling of not being experts on any one type of equipment. Nonetheless, most personnel are staying in the career field and reenlisting at a higher rate as TAFMS increases.

## IMPLICATIONS

There have been major changes for the personnel in this career field since the completion of the last 326XX OSRs. The 451X4A job has remained primarily the same, but 451X4B personnel have had to learn another type of test station (manual or electronic warfare). Previous AFSC 326X3 and 326X5 infrastructure remains in the current 451X4, but should begin to disappear as time passes. The biggest change has occurred for 7-level members who must now understand the maintenance of all three types of 451X4 avionics test stations and components. Career ladder progression is typical, remaining technical up to the 7-level where supervisory duties predominate. The AFR 39-1 Specialty Descriptions provide a fairly accurate picture of most of the duties of a 451X4, but could use some minor revision to include some of the nontechnical aspects of the job. Job satisfaction is lower than the comparative sample on all indicators, but has improved since the previous OSRs, especially in reenlistment intentions.

Analysis of the STS and the 45134A and 45134B POIs showed good support by the survey data. There were several areas of the POIs having high percentages of first-enlistment personnel performing, but not being trained and having no 3-level proficiency codes in the STS matched to them. There were several other 3-level proficiency codes within the STS that seem inappropriate when compared with survey data.

APPENDIX A

TABLE I

GROUP ID NUMBER AND TITLE: STG055, AUTOMATIC TEST STATION CLUSTER  
 GROUP SIZE: 265 PERCENT OF SAMPLE: 32  
 PREDOMINANT GRADE: E-4/-5 AVERAGE TICF: 56  
 AVERAGE TAFMS: 78

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

<u>REPRESENTATIVE TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU)	99
G257 REMOVE OR REPLACE LRU MINOR HARDWARE	97
F185 CLEAN SHOP FACILITIES	93
G236 ISOLATE MALFUNCTIONS WITHIN PRINTERS	85
N620 PERFORM PERIODIC MAINTENANCE ON CABINET BLOWER FILTERS	83
H316 PERFORM PROGRAMMED TEST OF IMU LRUs	82
N643 REPAIR SWITCHING COMPLEXES	82
H302 PERFORM PROGRAMMED TEST OF ADC LRUs	77
J425 PERFORM PROGRAMMED TEST OF CONVERTER PROGRAMMER LRUs	75
I376 PERFORM CONFIDENCE TEST OF CTSs	75
E117 ANNOTATE, INITIATE, OR COMPLETE AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	74
L523 PERFORM PROGRAMMED TEST OF 039 LRUs	74
L530 REPAIR 039	74
N603 PERFORM OA/FI OF CCDPs	75
H280 ISOLATE MALFUNCTIONS WITHIN CABIN/CIRCUIT AIR CONTROLLER (CCAC) LRUs	71
K483 PERFORM CONFIDENCE TEST OF DTSs	71
N621 PERFORM PERIODIC MAINTENANCE ON CABINET BLOWERS AND BLOWER WHEEL BLADES	71
M546 PERFORM CONFIDENCE TEST OF MTSs	70
J407 ISOLATE MALFUNCTIONS WITHIN CONVERTER PROGRAMMER LRUs, OTHER THAN DURING ON-AIRCRAFT OPERATIONAL CHECKOUTS	69
M547 PERFORM MICROWAVE HARMONIZATION PROCEDURES	64
K482 LEVEL HUD TABLES USING THEODOLITES AND ALIGNMENT FIXTURES	63
M551 PERFORM OA/FI OF IFSSs	63
M563 REPAIR MSSUs	62
A8 DETERMINE WORK PRIORITIES	53
E177 REVIEW AFTO FORMS 244 AND 245	53

## TABLE IA

GROUP ID NUMBER AND TITLE: STG095, COMPUTER TEST STATION (LRU ONLY)  
 GROUP SIZE: 25 TECHNICIANS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

<u>REPRESENTATIVE TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU)	100
H321 PERFORM PROGRAMMED TEST OF NCI LRUs	100
G265 REMOVE OR REPLACE TEST STATION LIGHT BULBS, FUSES, OR OTHER MINOR HARDWARE	96
H289 ISOLATE MALFUNCTIONS WITHIN INERTIAL MEASUREMENT UNIT (IMU) LRUs	96
H340 REPAIR IMUs	96
F185 CLEAN SHOP FACILITIES	96
H345 REPAIR NCIS	92
E122 COMPLETE AF FORMS 2005 (ISSUE/TURN IN REQUEST)	88
H317 PERFORM PROGRAMMED TEST OF IMU BATTERY LRUs	88
G258 REMOVE OR REPLACE LRU PINS OR CONNECTORS	88
G240 PERFORM PERIODIC INSPECTION OF TEST STATIONS	84
H304 PERFORM PROGRAMMED TEST OF ATTITUDE INDICATOR LRUs	84
E116 ANNOTATE OR COMPLETE AFTO FORMS 244 AND 245 (INDUSTRIAL/SUPPORT EQUIPMENT RECORD)	80
I376 PERFORM CONFIDENCE TEST OF CTSs	80
H325 PERFORM PROGRAMMED TEST OF ROLL/YAW FLCC LRUs	76
G238 LOAD MTTUs	72
H303 PERFORM PROGRAMMED TEST OF ASA LRUs	72
E143 INVENTORY TOOLS, SUCH AS CONSOLIDATED TOOL KITS (CTK) AND TOOL ROOM CHITS	60
F214 REPAIR CABLE ASSEMBLIES, SUCH AS REPLACING PINS, WIRES, OR HARDWARE	60
G230 INSPECT, CLEAN, OR ADJUST MAGNETIC TAPE TRANSPORT UNITS (MTTU)	56

TABLE IB

GROUP ID NUMBER AND TITLE: STG108, COMPUTER TEST STATION TECHNICIANS  
 GROUP SIZE: 184

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

<u>REPRESENTATIVE TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
G235 ISOLATE MALFUNCTIONS WITHIN LRU TEST PACKAGES	99
H340 REPAIR IMUs	99
G265 REMOVE OR REPLACE TEST STATION LIGHT BULBS, FUSES, OR OTHER MINOR HARDWARE	96
H298 ISOLATE MALFUNCTIONS WITHIN SIGNAL DATA RECORDER (SDR) LRUs	96
G238 LOAD MTTUs	95
I376 PERFORM CONFIDENCE TEST OF CTSs	95
H347 REPAIR PITCH FLCCs	93
N589 ISOLATE MALFUNCTIONS WITHIN DIAs	92
N620 PERFORM PERIODIC MAINTENANCE ON CABINET BLOWER FILTERS	92
N643 REPAIR SWITCHING COMPLEXES	91
N625 PERFORM PERIODIC MAINTENANCE ON PRINTERS	90
J425 PERFORM PROGRAMMED TEST OF CONVERTER PROGRAMMER LRUs	87
J441 REPAIR CONVERTER PROGRAMMERS	86
M546 PERFORM CONFIDENCE TEST OF MTSs	84
J418 ISOLATE MALFUNCTIONS WITHIN RADAR TARGET DATA PROCESSOR (IRE) LRUs	83
K483 PERFORM CONFIDENCE TEST OF DTSs	83
J400 ADJUST AIR NAVIGATION MULTIPLE INDICATOR (ANMI) SHOP REPLACEABLE UNITS (SRU)	82
E143 INVENTORY TOOLS, SUCH AS CONSOLIDATED TOOL KITS (CTK) AND TOOL ROOM CHITS	79

TABLE IC

GROUP ID NUMBER AND TITLE: STG102, MICROWAVE TEST STATION TECHNICIANS  
 GROUP SIZE: 23

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

<u>REPRESENTATIVE TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
G235 ISOLATE MALFUNCTIONS WITHIN LRU TEST PACKAGES	100
F185 CLEAN SHOP FACILITIES	96
G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU)	96
G266 REMOVE OR REPLACE TEST STATION PINS OR CONNECTORS	91
L531 REPAIR 081	91
M546 PERFORM CONFIDENCE TEST OF MTSs	87
L509 ADJUST RADAR RECEIVER (022) SRUs	87
L523 PERFORM PROGRAMMED TEST OF 039 LRUs	83
M536 INSPECT AND CLEAN MICROWAVE SIGNAL SWITCHING UNITS (MSSU) ATTENUATORS	83
M539 ISOLATE MALFUNCTIONS WITHIN MSSUs	83
M563 REPAIR MSSUs	83
N620 PERFORM PERIODIC MAINTENANCE ON CABINET BLOWER FILTERS	83
G227 INSPECT EQUIPMENT FOR CALIBRATION DATES	78
N618 PERFORM OA/FI OF SWITCHING COMPLEXES	74
F184 CLEAN OPTICAL SURFACES OR CONTACTS	70
N599 ISOLATE MALFUNCTIONS WITHIN SWITCHING COMPLEXES	70
M558 PERFORM OA/FI OF PHASEMETERS (PHM)	70
G248 PERFORM QA OR QC INSPECTION OF TEST STATIONS	65
L520 PERFORM PROGRAMMED TEST OF IB LRUs	65

TABLE ID

GROUP ID NUMBER AND TITLE: STG102, DISPLAYS TEST STATION TECHNICIANS  
 GROUP SIZE: 32

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

<u>REPRESENTATIVE TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
E122 COMPLETE AF FORMS 2005 (ISSUE/TURN IN REQUEST)	100
G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU)	100
G258 REMOVE OR REPLACE LRU PINS OR CONNECTORS	100
F185 CLEAN SHOP FACILITIES	97
K483 PERFORM CONFIDENCE TEST OF DTSS	97
E138 INITIATE OR COMPLETE AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	94
G240 PERFORM PERIODIC INSPECTION OF TEST STATIONS	94
J400 ADJUST AIR NAVIGATION MULTIPLE INDICATOR (ANMI) SHOP REPLACEABLE UNITS (SRU)	94
J425 PERFORM PROGRAMMED TEST OF CONVERTER PROGRAMMER LRUs	94
J441 REPAIR CONVERTER PROGRAMMERS	94
J401 ADJUST HEADS UP DISPLAY (HUD) UNIT SRUs	91
J407 ISOLATE MALFUNCTIONS WITHIN CONVERTER PROGRAMMER LRUs, OTHER THAN DURING ON-AIRCRAFT OPERATIONAL CHECKOUTS	91
J450 REPAIR PSDPS	91
J410 ISOLATE MALFUNCTIONS WITHIN FLIGHT DIRECTOR ADAPTER (FDA) LRUs	87
G227 INSPECT EQUIPMENT FOR CALIBRATION DATES	81
K482 LEVEL HUD TABLES USING THEODOLITES AND ALIGNMENT FIXTURES	81
E143 INVENTORY TOOLS, SUCH AS CONSOLIDATED TOOL KITS (CTK) AND TOOL ROOM CHITS	78
N643 REPAIR SWITCHING COMPLEXES	78
G273 RESEARCH PROGRAM MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES	75
J454 REPAIR 042	72
N618 PERFORM OA/FI OF SWITCHING COMPLEXES	72

TABLE II

GROUP ID NUMBER AND TITLE: STG032, MANUAL OR ELECTRONIC WARFARE  
 GROUP SIZE: 373 TEST STATION CLUSTER  
 PREDOMINANT GRADE: E-3/-4/-5 PERCENT OF SAMPLE: 44  
 AVERAGE TAFMS: 65 AVERAGE TICF: 49

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

<u>REPRESENTATIVE TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
E122 COMPLETE AF FORMS 2005 (ISSUE/TURN IN REQUEST)	94
G265 REMOVE OR REPLACE TEST STATION LIGHT BULBS, FUSES, OR OTHER MINOR HARDWARE	94
G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU)	93
F185 CLEAN SHOP FACILITIES	89
F183 CLEAN AND LUBRICATE EQUIPMENT COMPONENTS	74
G254 PREPARE EQUIPMENT FOR TURN-IN	69
0653 REPAIR RADAR SYSTEM ANTENNAS	66
0650 PERFORM OPERATIONAL CHECKOUT OF RADAR SYSTEM ANTENNAS	65
Q673 ALIGN AN/ARC-164 OR AN/ARC-164(HQ) ULTRAHIGH FREQUENCY (UHF) RADIO RECEIVER/TRANSMITTERS (R/T)	63
Q685 PERFORM OPERATIONAL CHECKOUT OF AN/ARC-164 OR AN/ARC-164(HQ) UHF RADIO R/Ts	63
Q678 ISOLATE MALFUNCTIONS WITHIN AAIs	63
S762 PERFORM OPERATIONAL CHECKOUT OF ICCPs OR ICCP(HQ)s	63
S718 ALIGN INTEGRATED COMMUNICATIONS CONTROL PANELS (ICCP) OR ICCP(HQ)	60
S757 PERFORM OPERATIONAL CHECKOUT OF FAN TURBINE INLET TEMPERATURE (FTIT) INDICATORS	56
P665 REPAIR ANTENNA A TEST STATIONS	56
P659 ISOLATE MALFUNCTIONS WITHIN ANTENNA B TEST STATIONS	54
S712 ADJUST CONTROLLER AIRCRAFT GRIP ASSEMBLIES	53
S722 ISOLATE MALFUNCTIONS WITHIN AVIONICS STATUS PANELS (ASP)	52
D86 CONDUCT OJT	46
D101 MAINTAIN TRAINING RECORDS	45
V926 PERFORM TITE BASIC CA/FIs	38
B51 SUPERVISE APPRENTICE AVIONICS MANUAL AND ELECTRONIC WARFARE TEST STATION CONSOLE SPECIALIST (AFSC 45134B)	37
U874 REPAIR AN/ALR-56 HIGH BAND RECEIVERS	36
U828 ALIGN AN/ALR-56 LOW BAND RECEIVER PROCESSORS	36
U841 ISOLATE MALFUNCTIONS WITHIN AN/ALR-56 LOW BAND RECEIVER PROCESSORS	36

TABLE IIA

GROUP ID NUMBER AND TITLE: STG246, TACTICAL ELECTRONIC WARFARE  
 SYSTEM (TEWS) INTERMEDIATE TEST EQUIPMENT (TITE) (TRU ONLY) TECHNICIANS  
 GROUP SIZE: 5

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

<u>REPRESENTATIVE TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
E119 ATTACH OR ANNOTATE EQUIPMENT STATUS LABELS OR TAGS, SUCH AS DD FORMS 1574 (SERVICEABLE TAG - MATERIAL)	100
E122 COMPLETE AF FORMS 2005 (ISSUE/TURN IN REQUEST)	100
E138 INITIATE OR COMPLETE AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	100
G227 INSPECT EQUIPMENT FOR CALIBRATION DATES	100
G235 ISOLATE MALFUNCTIONS WITHIN LRU TEST PACKAGES	100
G237 ISOLATE MALFUNCTIONS WITHIN TEST STATION INTERFACE ADAPTERS	100
G264 REMOVE OR REPLACE TEST STATION INTERFACE COMPONENTS	100
G265 REMOVE OR REPLACE TEST STATION LIGHT BULBS, FUSES, OR OTHER MINOR HARDWARE	100
V910 ISOLATE MALFUNCTIONS WITHIN TITE FREQUENCY SYNTHESIZERS	100
V913 ISOLATE MALFUNCTIONS WITHIN TITE INPUT/OUTPUT CAGES	100
V926 PERFORM TITE BASIC OA/FIs	100
V931 PERFORM TITE DISC UPDATES	100
V945 REPAIR TITE UUT POWER SUPPLIES	100
E116 ANNOTATE OR COMPLETE AFTO FORMS 244 AND 245 (INDUSTRIAL/SUPPORT EQUIPMENT RECORD)	80
V896 DETERMINE WHETHER MALFUNCTIONS ARE IN TITE OR UUT	80
G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU)	60

TABLE IIB

GROUP ID NUMBER AND TITLE: STG104, TACTICAL ELECTRONIC WARFARE SYSTEM (TEWS) INTERMEDIATE TEST EQUIPMENT (TITE) TECHNICIANS  
 GROUP SIZE: 126

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

<u>REPRESENTATIVE TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
U839 ISOLATE MALFUNCTIONS WITHIN AN/ALQ-135 TUNING UNITS	99
U841 ISOLATE MALFUNCTIONS WITHIN AN/ALR-56 LOW BAND RECEIVER PROCESSORS	99
G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU)	98
U828 ALIGN AN/ALR-56 LOW BAND RECEIVER PROCESSORS	98
U873 REPAIR AN/ALQ-135 TUNING UNITS	98
V926 PERFORM TITE BASIC OA/FIs	97
G258 REMOVE OR REPLACE LRU PINS OR CONNECTORS	96
U837 ISOLATE MALFUNCTIONS WITHIN AN/ALQ-135 LPSSs	96
E122 COMPLETE AF FORMS 2005 (ISSUE/TURN IN REQUEST)	94
U848 PERFORM OPERATIONAL TEST OF AN/ALQ-128 R/Ts	94
V932 PERFORM TITE DISC-TO-DISC TRANSFER PROCEDURES	91
F185 CLEAN SHOP FACILITIES	90
G240 PERFORM PERIODIC INSPECTION OF TEST STATIONS	90
U864 PROGRAM OR REPROGRAM AN/ALR-56 RECEIVER PROCESSORS	90
V917 ISOLATE MALFUNCTIONS WITHIN TITE RADIO FREQUENCY (RF) CONSOLES	88
V944 REPAIR TITE RF CONSOLES	87
F220 SOLDER COMPONENTS, SUCH AS RELAYS, RESISTERS, OR PLUGS	83
V942 REPAIR TITE INTERFACE CHASSIS	78
E113 ANNOTATE AFTO FORMS 95 (SIGNIFICANT HISTORICAL DATA)	74
V920 ISOLATE MALFUNCTIONS WITHIN TITE SYNTHESIZER SYSTEMS	72

TABLE IIC

GROUP ID NUMBER AND TITLE: STG135, ANTENNA A AND B TEST STATION  
 GROUP SIZE: 12 TECHNICIANS

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

<u>REPRESENTATIVE TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
E122 COMPLETE AF FORMS 2005 (ISSUE/TURN IN REQUEST)	100
G240 PERFORM PERIODIC INSPECTION OF TEST STATIONS	100
G257 REMOVE OR REPLACE LRU MINOR HARDWARE	100
O648 ISOLATE MALFUNCTIONS WITHIN RADAR SYSTEM LOW VOLTAGE POWER SUPPLIES (LVPS)	100
E143 INVENTORY TOOLS, SUCH AS CONSOLIDATED TOOL KITS (CTK) AND TOOL ROOM CHITS	92
G254 PREPARE EQUIPMENT FOR TURN-IN	92
O655 REPAIR RADAR SYSTEM TRANSMITTERS	92
P658 ISOLATE MALFUNCTIONS WITHIN ANTENNA A TEST STATIONS	92
G265 REMOVE OR REPLACE TEST STATION LIGHT BULBS, FUSES, OR OTHER MINOR HARDWARE	92
P661 PERFORM CONFIDENCE TEST OF ANTENNA A TEST STATIONS	92
P663 PERFORM OA/FI OF ANTENNA A TEST STATIONS	92
O645 ALIGN RADAR SYSTEM ANTENNAS	83
O646 ALIGN RADAR SYSTEM TRANSMITTERS	83
O650 PERFORM OPERATIONAL CHECKOUT OF RADAR SYSTEM ANTENNAS	83
O653 REPAIR RADAR SYSTEM ANTENNAS	83
P656 CALIBRATE ANTENNA A TEST STATIONS	83
P666 REPAIR ANTENNA B TEST STATIONS	83
P667 SERVICE ANTENNA A TEST STATION HYDRAULIC POWER SUPPLIES	83
E119 ATTACH OR ANNOTATE EQUIPMENT STATUS LABELS OR TAGS, SUCH AS DD FORMS 1574 (SERVICEABLE TAG - MATERIAL)	75
F185 CLEAN SHOP FACILITIES	75
F189 INTERPRET SYSTEM DIAGRAMS OR SCHEMATICS	75

TABLE IID

GROUP ID NUMBER AND TITLE: GRP074, AVIONICS TECHNICIANS  
 GROUP SIZE: 204

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

<u>REPRESENTATIVE TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
S730 ISOLATE MALFUNCTIONS WITHIN ICCPs OR ICCP(HQ)s	97
Q694 REPAIR AAIs	96
Q679 ISOLATE MALFUNCTIONS WITHIN AN/ARC-164 OR AN/ARC-164(HQ) UHF RADIO SYSTEMS TO SRUs OR CHASSIS	95
Q685 PERFORM OPERATIONAL CHECKOUT OF AN/ARC-164 OR AN/ARC-164(HQ) UHF RADIO R/Ts	95
E122 COMPLETE AF FORMS 2005 (ISSUE/TURN IN REQUEST)	94
S762 PERFORM OPERATIONAL CHECKOUT OF ICCPs OR ICCP(HQ)s	94
G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU)	93
Q676 ALIGN IDENTIFICATION FRIEND OR FOE (IFF) LRUs	93
S794 REPAIR ICCPs OR ICCP(HQ)s	93
F185 CLEAN SHOP FACILITIES	92
G240 PERFORM PERIODIC INSPECTION OF TEST STATIONS	91
0650 PERFORM OPERATIONAL CHECKOUT OF RADAR SYSTEM ANTENNAS	91
S718 ALIGN INTEGRATED COMMUNICATIONS CONTROL PANELS (ICCP) OR ICCP(HQ)	91
S735 ISOLATE MALFUNCTIONS WITHIN MAIN COMMUNICATIONS CONTROL PANELS (MCCP)	91
S754 PERFORM OPERATIONAL CHECKOUT OF CONTROLLER AIRCRAFT GRIP ASSEMBLIES	90
G258 REMOVE OR REPLACE LRU PINS OR CONNECTORS	89
E138 INITIATE OR COMPLETE AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	88
F203 PERFORM SAFETY WIRING	88
S792 REPAIR CONTROLLER AIRCRAFT GRIP ASSEMBLIES	88
0647 ISOLATE MALFUNCTIONS WITHIN RADAR SYSTEM ANTENNAS	87
P668 SERVICE ANTENNA B TEST STATION COOLANT CONDITIONING UNIT (CCU) SYSTEM WITH COOLANT OIL	84
S746 PERFORM OPERATIONAL CHECKOUT OF ALTITUDE INDICATORS	83
R704 PERFORM IDENTIFICATION FRIEND OR FOE (IFF) RADIO FREQUENCY (RF) LOSS CORRECTION CHART PROCEDURES	82

TABLE IIE

GROUP ID NUMBER AND TITLE: STG064, TEAM LEADERS  
 GROUP SIZE: 12

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

<u>REPRESENTATIVE TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
E138 INITIATE OR COMPLETE AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	100
E143 INVENTORY TOOLS, SUCH AS CONSOLIDATED TOOL KITS (CTK) AND TOOL ROOM CHITS	100
G257 REMOVE OR REPLACE LRU MINOR HARDWARE	100
D101 MAINTAIN TRAINING RECORDS	92
E113 ANNOTATE AFTO FORMS 95 (SIGNIFICANT HISTORICAL DATA)	83
G237 ISOLATE MALFUNCTIONS WITHIN TEST STATION INTERFACE ADAPTERS	83
F185 CLEAN SHOP FACILITIES	75
G268 REMOVE OR REPLACE TEST STATION TESTER REPLACEABLE UNITS-(TRU)	75
E167 PERFORM ROUTINE INSPECTION OF TOOLS	75
A8 DETERMINE WORK PRIORITIES	67
B52 SUPERVISE AVIONICS MANUAL AND ELECTRONIC WARFARE TEST STATION CONSOLE SPECIALIST (AFSC 45154B)	67
E168 PERFORM SHIFT SECURITY CHECKS OF TOOLS AND EQUIPMENT	67
F183 CLEAN AND LUBRICATE EQUIPMENT COMPONENTS	67
G226 FABRICATE OR REBUILD AVIONICS CABLES	67
C73 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS	58
G254 PREPARE EQUIPMENT FOR TURN-IN	58
A20 PLAN OR SCHEDULE WORK ASSIGNMENTS	50
U875 REPAIR AN/ALR-56 LOW BAND RECEIVER PROCESSORS	50
U828 ALIGN AN/ALR-56 LOW BAND RECEIVER PROCESSORS	42
U840 ISOLATE MALFUNCTIONS WITHIN AN/ALR-56 HIGH BAND RECEIVERS	42
U857 PERFORM OPERATIONAL TEST OF AN/ALR-56 HIGH BAND RECEIVERS	42

TABLE III

GROUP ID NUMBER AND TITLE: STG054, SUPERVISORY CLUSTER  
 GROUP SIZE: 76 PERCENT OF SAMPLE: 9  
 PREDOMINANT GRADE: E-6 AVERAGE TICF: 104  
 AVERAGE TAFMS: 154

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

<u>REPRESENTATIVE TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
C73 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS	96
C79 WRITE APRs	93
B46 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	92
D83 ANNOTATE TRAINING RECORDS	87
C80 WRITE RECOMMENDATIONS FOR AWARDS AND DECORATIONS	80
A16 ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	80
D101 MAINTAIN TRAINING RECORDS	79
A20 PLAN OR SCHEDULE WORK ASSIGNMENTS	78
A21 PLAN OR SCHEDULE WORK PRIORITIES	78
E177 REVIEW AFTO FORMS 244 AND 245	78
B53 SUPERVISE AVIONICS TEST STATION AND COMPONENT TECHNICIAN (AFSC 45174)	75
E181 VERIFY MISSION CAPABILITY (MICAP) CONDITIONS	71
E119 ATTACH OR ANNOTATE EQUIPMENT STATUS LABELS OR TAGS, SUCH AS DD FORMS 1574 (SERVICEABLE TAG - MATERIAL)	67
B40 IMPLEMENT SAFETY OR SECURITY PROGRAMS	67
D90 DETERMINE TRAINING REQUIREMENTS	66
E113 ANNOTATE AFTO FORMS 95 (SIGNIFICANT HISTORICAL DATA)	59
D86 CONDUCT OJT	58
C72 INDORSE AIRMAN PERFORMANCE REPORTS (APR)	51
B28 ADJUST DAILY MAINTENANCE PLANS TO MEET OPERATIONAL COMMITMENTS	51
A13 DEVELOP SELF-INSPECTION PROGRAMS	51
D104 PREPARE JOB QUALIFICATION STANDARDS (JQS)	46
B52 SUPERVISE AVIONICS MANUAL AND ELECTRONIC WARFARE TEST STATION CONSOLE SPECIALIST (AFSC 45154B)	46
G245 PERFORM QA OR QC INSPECTION OF LRUs	43
E120 COMPILE DATA FOR REPORTS	38

TABLE IIIA

GROUP ID NUMBER AND TITLE: STG122, INSTRUCTORS OR SUPERVISORS  
 GROUP SIZE: 11

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

<u>REPRESENTATIVE TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
D95 DIRECT OR IMPLEMENT TRAINING PROGRAMS	100
B31 COUNSEL PERSONNEL ON PERSONAL OR MILITARY-RELATED MATTERS	91
C73 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS	91
C79 WRITE APRs	91
D83 ANNOTATE TRAINING RECORDS	91
D97 EVALUATE EFFECTIVENESS OF TRAINING PROGRAMS	91
D98 EVALUATE PERSONNEL FOR TRAINING NEEDS	91
D103 PLAN OR SCHEDULE TRAINING, SUCH AS OJT AND ANCILLARY TRAINING	91
D99 EVALUATE PROGRESS OF TRAINEES	82
D107 WRITE TEST QUESTIONS	82
A20 PLAN OR SCHEDULE WORK ASSIGNMENTS	73
B46 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	73
C65 EVALUATE PERSONNEL FOR COMPLIANCE WITH PERFORMANCE STANDARDS OR TECHNICAL ORDERS	73
C78 SELECT PERSONNEL FOR SPECIALIZED TRAINING	73
D86 CONDUCT OJT	73
D94 DEVELOP RESIDENT COURSE TRAINING MATERIALS	73
B53 SUPERVISE AVIONICS TEST STATION AND COMPONENT TECHNICIAN (AFSC 45174)	64
B52 SUPERVISE AVIONICS MANUAL AND ELECTRONIC WARFARE TEST STATION CONSOLE SPECIALIST (AFSC 45154B)	55

TABLE IIIB

GROUP ID NUMBER AND TITLE: GRP092, PRODUCTION SUPERVISORS  
 GROUP SIZE: 30

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

<u>REPRESENTATIVE TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
C73 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS	100
E177 REVIEW AFTO FORMS 244 AND 245	100
E181 VERIFY MISSION CAPABILITY (MICAP) CONDITIONS	100
D101 MAINTAIN TRAINING RECORDS	97
A5 COORDINATE MAINTENANCE WORK WITH APPROPRIATE PERSONNEL OR AGENCIES	93
A21 PLAN OR SCHEDULE WORK PRIORITIES	93
B46 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	93
C79 WRITE APRs	93
E119 ATTACH OR ANNOTATE EQUIPMENT STATUS LABELS OR TAGS, SUCH AS DD FORMS 1574 (SERVICEABLE TAG - MATERIAL)	93
E168 PERFORM SHIFT SECURITY CHECKS OF TOOLS AND EQUIPMENT	90
B35 DIRECT SHOP MAINTENANCE ACTIVITIES	80
B36 DIRECT UTILIZATION OR MAINTENANCE OF EQUIPMENT	80
D98 EVALUATE PERSONNEL FOR TRAINING NEEDS	80
A16 ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	77
G228 INSPECT OR CLEAN TEST STATIONS OR LINE REPLACEABLE UNITS (LRU)	77
G245 PERFORM QA OR QC INSPECTION OF LRUs	73
E171 PROCESS DIFM ITEMS	73
C65 EVALUATE PERSONNEL FOR COMPLIANCE WITH PERFORMANCE STANDARDS OR TECHNICAL ORDERS	70
F185 CLEAN SHOP FACILITIES	70
G254 PREPARE EQUIPMENT FOR TURN-IN	70
B50 SUPERVISE AVIONICS AUTOMATIC TEST STATION AND COMPONENT SPECIALIST (AFSC 45154A)	63
G240 PERFORM PERIODIC INSPECTION OF TEST STATIONS	63
D90 DETERMINE TRAINING REQUIREMENTS	57

TABLE IIIC

GROUP ID NUMBER AND TITLE: STG100, AUTOMATIC TEST STATION (ATS) NCOICs  
 GROUP SIZE: 31

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

<u>REPRESENTATIVE TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
B46 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	100
A25 SCHEDULE PERSONNEL FOR LEAVE OR TEMPORARY DUTY (TDY) ASSIGNMENT	97
C79 WRITE APRs	97
C73 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS	97
B30 CONDUCT SUPERVISORY ORIENTATIONS OF NEWLY ASSIGNED PERSONNEL	94
A2 ASSIGN PERSONNEL TO DUTY POSITIONS	90
A16 ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	90
B35 DIRECT SHOP MAINTENANCE ACTIVITIES	90
B40 IMPLEMENT SAFETY OR SECURITY PROGRAMS	90
B53 SUPERVISE AVIONICS TEST STATION AND COMPONENT TECHNICIAN (AFSC 45174)	87
D84 ASSIGN ON-THE-JOB TRAINING (OJT) TRAINERS	87
C65 EVALUATE PERSONNEL FOR COMPLIANCE WITH PERFORMANCE STANDARDS OR TECHNICAL ORDERS	84
D98 EVALUATE PERSONNEL FOR TRAINING NEEDS	84
C56 ANALYZE WORKLOAD REQUIREMENTS	81
C67 EVALUATE SAFETY OR SECURITY PROGRAMS	81
D83 ANNOTATE TRAINING RECORDS	81
A22 PLAN SAFETY OR SECURITY PROGRAMS	74
E177 REVIEW AFTO FORMS 244 AND 245	71
D95 DIRECT OR IMPLEMENT TRAINING PROGRAMS	68
E120 COMPILE DATA FOR REPORTS	52

TABLE IV

GROUP ID NUMBER AND TITLE: STG020, TRAINING CLUSTER  
 GROUP SIZE: 40 PERCENT OF SAMPLE: 5  
 PREDOMINANT GRADE: E-5 AVERAGE TICF: 91  
 AVERAGE TAFMS: 96

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

<u>REPRESENTATIVE TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
D82 ADMINISTER TESTS	90
D106 SCORE TESTS	90
D107 WRITE TEST QUESTIONS	80
D87 CONDUCT RESIDENT COURSE CLASSROOM TRAINING	75
D94 DEVELOP RESIDENT COURSE TRAINING MATERIALS	67
D99 EVALUATE PROGRESS OF TRAINEES	57
D93 DEVELOP PERFORMANCE TESTS	57
D89 COUNSEL TRAINEES ON TRAINING PROGRESS	52
F185 CLEAN SHOP FACILITIES	40
F189 INTERPRET SYSTEM DIAGRAMS OR SCHEMATICS	37
D83 ANNOTATE TRAINING RECORDS	32
B31 COUNSEL PERSONNEL ON PERSONAL OR MILITARY-RELATED MATTERS	27
D95 DIRECT OR IMPLEMENT TRAINING PROGRAMS	22
E177 REVIEW AFTO FORMS 244 AND 245	22
C73 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS	22
N606 PERFORM OA/FI OF DIA AUX DRAWERS	22
N605 PERFORM OA/FI OF DIAS	20
F217 RESEARCH TECHNICAL ORDERS	20
D105 PROCURE TRAINING AIDS, SPACE, OR EQUIPMENT	20

TABLE IVA

GROUP ID NUMBER AND TITLE: STG037, CLASSROOM INSTRUCTORS  
 GROUP SIZE: 33

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

<u>REPRESENTATIVE TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
D82 ADMINISTER TESTS	97
D87 CONDUCT RESIDENT COURSE CLASSROOM TRAINING	79
D107 WRITE TEST QUESTIONS	79
D94 DEVELOP RESIDENT COURSE TRAINING MATERIALS	67
D99 EVALUATE PROGRESS OF TRAINEES	57
D83 ANNOTATE TRAINING RECORDS	33
F185 CLEAN SHOP FACILITIES	33
F189 INTERPRET SYSTEM DIAGRAMS OR SCHEMATICS	30
B31 COUNSEL PERSONNEL ON PERSONAL OR MILITARY-RELATED MATTERS	24
C73 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS	24
E116 ANNOTATE OR COMPLETE AFTO FORMS 244 AND 245 (INDUSTRIAL/SUPPORT EQUIPMENT RECORD)	24
V926 PERFORM TITE BASIC OA/FIs	21
D100 EVALUATE TRAINING METHODS AND TECHNIQUES	18
D101 MAINTAIN TRAINING RECORDS	18
V928 PERFORM TITE DAILY CONFIDENCE TESTS (DCT)	18
A4 COORDINATE CALIBRATION OF SPECIAL TOOLS OR TEST EQUIPMENT WITH PRECISION MEASUREMENT EQUIPMENT LABORATORY (PMEL)	15
E177 REVIEW AFTO FORMS 244 AND 245	15
D97 EVALUATE EFFECTIVENESS OF TRAINING PROGRAMS	12
E159 MAINTAIN TECHNICAL ORDER FILES	12

## TABLE IVB

GROUP ID NUMBER AND TITLE: STG047, EQUIPMENT INSTRUCTORS  
 GROUP SIZE: 7

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

<u>REPRESENTATIVE TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
J429 PERFORM PROGRAMMED TEST OF HUD UNIT LRUs	100
K491 PERFORM OA/FI OF FMNAs	100
L522 PERFORM PROGRAMMED TEST OF 022 LRUs	100
M552 PERFORM OA/FI OF MSSUs	100
D106 SCORE TESTS	86
D107 WRITE TEST QUESTIONS	86
I381 PERFORM OA/FI OF PNEUGS	86
K482 LEVEL HUD TABLES USING THEODOLITES AND ALIGNMENT FIXTURES	86
K483 PERFORM CONFIDENCE TEST OF DTSs	86
F189 INTERPRET SYSTEM DIAGRAMS OR SCHEMATICS	71
D94 DEVELOP RESIDENT COURSE TRAINING MATERIALS	71
H316 PERFORM PROGRAMMED TEST OF IMU LRUs	71
I386 PERFORM OA/FI OF RATE TABLES	71
D87 CONDUCT RESIDENT COURSE CLASSROOM TRAINING	57
D82 ADMINISTER TESTS	57
D93 DEVELOP PERFORMANCE TESTS	57
D99 EVALUATE PROGRESS OF TRAINEES	57
M551 PERFORM OA/FI OF IFSSs	57
M559 PERFORM OA/FI OF XBSSs	57
A7 DETERMINE PUBLICATION REQUIREMENTS	43
B31 COUNSEL PERSONNEL ON PERSONAL OR MILITARY-RELATED MATTERS	43
G273 RESEARCH PROGRAM MANUALS TO DETERMINE FAULT ISOLATION PROCEDURES	43
B34 DIRECT MAINTENANCE OF TECHNICAL ORDER (TO) FILES	29

TABLE V

GROUP ID NUMBER AND TITLE: STG091, DUE IN FOR MAINTENANCE MONITOR IJT  
 GROUP SIZE: 11 PERCENT OF SAMPLE: 1  
 PREDOMINANT GRADE: E-4 AVERAGE TICF: 51  
 AVERAGE TAFMS: 58

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

<u>REPRESENTATIVE TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
E144 MAINTAIN AF FORMS 2005 SUSPENSE FILES	100
E126 COMPLETE DD FORMS 1348-1 (DOD SINGLE LINE ITEM RELEASE/RECEIPT DOCUMENT)	91
E138 INITIATE OR COMPLETE AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	91
E147 MAINTAIN DUE-IN-FROM-MAINTENANCE (DIFM) TRANSACTION ROSTERS (D23)	91
E171 PROCESS DIFM ITEMS	91
E122 COMPLETE AF FORMS 2005 (ISSUE/TURN IN REQUEST)	82
E119 ATTACH OR ANNOTATE EQUIPMENT STATUS LABELS OR TAGS, SUCH AS DD FORMS 1574 (SERVICEABLE TAG - MATERIAL)	73
E163 MAINTAIN TRANSACTION ROSTERS, SUCH AS D04, D18, D19, AND M30	73
E169 PREPARE INITIAL ISSUE OR BYPASS LETTERS FOR REPAIR CYCLE TURN-INS	55
E115 ANNOTATE OR COMPLETE AF FORMS 2413 (SUPPLY CONTROL LOG)	45
E127 COMPLETE DD FORMS 1348-6 (DOD SINGLE LINE ITEM REQUISITION SYSTEM DOCUMENT)	45
E181 VERIFY MISSION CAPABILITY (MICAP) CONDITIONS	45
E151 MAINTAIN MICROFICHE STOCK FILES	36
E176 REVIEW AF FORMS 2413	36
B43 IMPLEMENT SUPPLY PROCEDURES	36
A5 COORDINATE MAINTENANCE WORK WITH APPROPRIATE PERSONNEL OR AGENCIES	27
E128 EVALUATE SUPPLY PRACTICES OR PROCEDURES	27
E161 MAINTAIN TEST STATION STATUS INDICATORS, SUCH AS BOARDS, GRAPHS, OR CHARTS	27
E180 VALIDATE BENCHSTOCK LISTINGS	27
F195 PACK OR UNPACK LINE REPLACEABLE UNITS (LRU) FOR STORAGE, SHIPMENT, OR CLIMATIC CONDITIONS	27
G224 CALIBRATE TORQUE WRENCHES	27
G254 PREPARE EQUIPMENT FOR TURN-IN	27
E146 MAINTAIN DEFICIENCY, SERVICE, OR STATUS REPORTS	18
F185 CLEAN SHOP FACILITIES	18

TABLE VI

GROUP ID NUMBER AND TITLE: STG045, QUALITY ASSURANCE OR QUALITY  
CONTROL INSPECTOR IJT

GROUP SIZE: 8

PERCENT OF SAMPLE: 1

PREDOMINANT GRADE: E-5

AVERAGE TICF: 64

AVERAGE TAFMS: 137

THE FOLLOWING ARE IN DESCENDING ORDER BY PERCENT MEMBERS PERFORMING:

<u>REPRESENTATIVE TASKS</u>	<u>PERCENT MEMBERS PERFORMING</u>
C65 EVALUATE PERSONNEL FOR COMPLIANCE WITH PERFORMANCE STANDARDS OR TECHNICAL ORDERS	87
C74 INSPECT SHOP MAINTENANCE ACTIONS	87
G245 PERFORM QA OR QC INSPECTION OF LRUs	87
G246 PERFORM QA OR QC INSPECTION OF TEST STATION COMMON MAINTENANCE TEST PACKAGES (CMTP)	87
G247 PERFORM QA OR QC INSPECTION OF TEST STATION MAINTENANCE TEST PACKAGES (MTP)	87
G248 PERFORM QA OR QC INSPECTION OF TEST STATIONS	87
A10 DEVELOP INSPECTION PROCEDURES	
A12 DEVELOP QUALITY ASSURANCE PROGRAMS	75
C60 EVALUATE INSPECTION REPORT FINDINGS	75
C67 EVALUATE SAFETY OR SECURITY PROGRAMS	75
C75 INVESTIGATE ACCIDENTS OR INCIDENTS	75
C81 WRITE STAFF STUDIES, SURVEYS, OR SPECIAL REPORTS, OTHER THAN TRAINING REPORTS	75
C69 EVALUATE TECHNICAL ORDER IMPROVEMENT REPORTS	75
G244 PERFORM QUALITY ASSURANCE (QA) OR QUALITY CONTROL (QC) INSPECTION OF LRU TEST PACKAGES	75
E166 PERFORM PERIODIC INSPECTION OF TOOLS	62
C59 EVALUATE EQUIPMENT MODIFICATION DATA	62
C68 EVALUATE SUGGESTIONS	62
E143 INVENTORY TOOLS, SUCH AS CONSOLIDATED TOOL KITS (CTK) AND TOOL ROOM CHITS	62
E167 PERFORM ROUTINE INSPECTION OF TOOLS	62
E177 REVIEW AFTO FORMS 244 AND 245	62
A13 DEVELOP SELF-INSPECTION PROGRAMS	50
E124 COMPLETE AF FORMS 2420 (QUALITY CONTROL INSPECTION SUMMARY)	50
C73 INSPECT PERSONNEL FOR COMPLIANCE WITH MILITARY STANDARDS	50
E173 REPORT MATERIAL DEFICIENCIES	37
G249 PERFORM TCTO INSPECTIONS AND MODIFICATIONS OF LRUs	37
G227 INSPECT EQUIPMENT FOR CALIBRATION DATES	37